TEEJAY PUBLISHERS

5-14 Mathematics

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Level B Textbook

a cornerstone in Scottish Education

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Level B Textbook

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Special thanks to Pauline McShane for her contribution of the answers to this book.

PUPIL BOOK

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Level B Textbook

The book can be used in both Primary and Secondary with pupils who have gained a Level A.

- In secondary schools it can be used with those pupils who had already gained a National Test level A in Primary or early Secondary.

  - It should prepare pupils to sit maths level B national test, **or equivalent**, by the end of Primary 3, 4, 5, 6, 7 or by the end of Secondary 1, 2.
  - There are no A and B exercises. It basically covers the **entire Level B course** without the teacher having to pick and choose which questions to leave out and which exercises are important. They all are !
  - It covers the important work of level B in ONE textbook.
  - It contains a 10 page "**Chapter Zero**" which primarily revises every topic at level A and can be used as a diagnostic tool. This could be followed by a diagnostic assessment * of the work of Level A.
  - Non-calculator skills will be emphasised and encouraged throughout the book
  - Each topic will have a "**Topic in a Nutshell**" exercise as a summary.
  - Homework is available as a photocopiable pack along with an Assessment pack which can be used topic by topic or combined to form a series of level B cumulative Tests.
  - Photocopiable **worksheets** are available to accompany most exercises and are marked like this :-

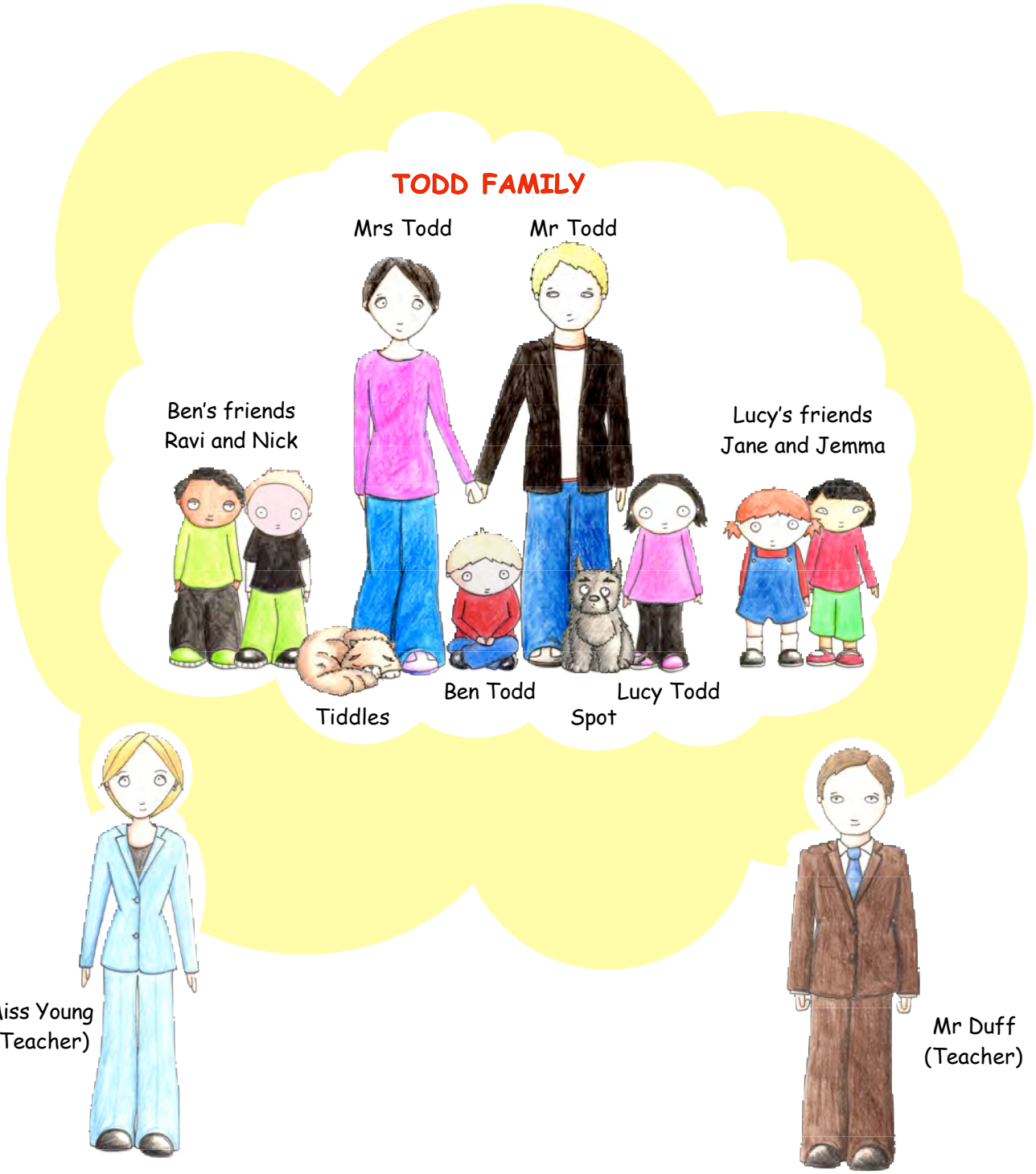
We make no apologies for the multiplicity of colours used throughout the book, both for text and in diagrams - we felt it helped brightened up the pages !!

Tom Strang and Jim Geddes

(September 2005)

Contents

The Characters

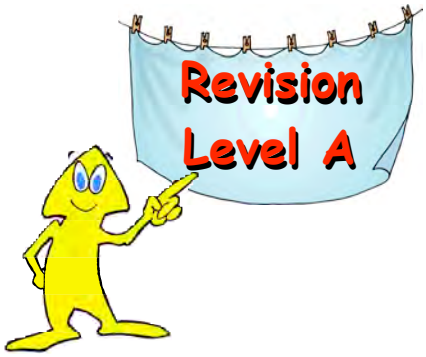


TeeJay gratefully acknowledges
the Artwork
by

Susan Fitzpatrick

Chapter 0

Calculators should NOT be used.



1. Write these numbers using digits :- **a** eight **b** seventeen.

2. How many cars can you see ?

3. Look at the children.

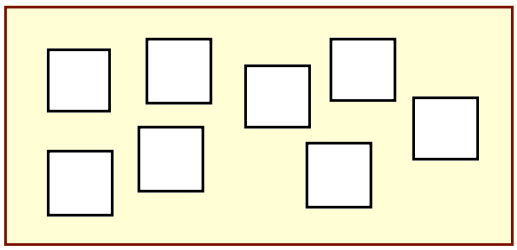
Tom (12) Sue (9) Nick (15) Ann (11) Neil (14) May (13)

a Who is the oldest ? **b** Who is the youngest ?

c Which girl is older than Tom ?

4. **a** Make a neat copy of these **8 squares**.

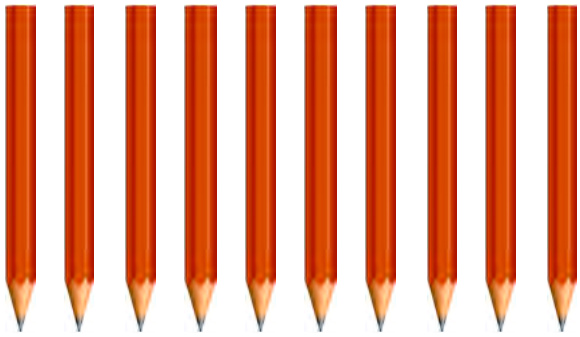
b Colour in $\frac{1}{2}$ of the squares.



5. Look at these numbers :- **4, 12, 16, 10, 7, 13, 19, 11, 20.**

Copy them down **in order**. Start with the **smallest**.

6. Jane has some pencils.



a How many pencils can you see ?

Jane puts three pencils in her bag.

b How many pencils are left ?

7. Neil drew a teddy bear.

drawing **A** drawing **B** drawing **C** drawing **D** drawing **E**

a Which of the 5 drawings must Neil have drawn **first** ?

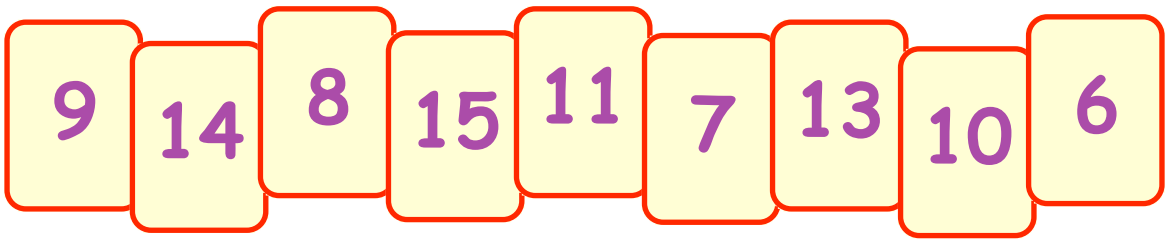
b Which of the 5 drawings was **last** to be drawn ?

8. Tim has ten balloons.

They are numbered **0** to **9**.

Which balloon is missing ?

9. Amy has 10 cards. They are numbered **6** to **15**.



Which card number is missing ?

10. Look at these coins :-

a Which coin is worth **most** ? **b** Which coin is worth **least** ?

11. How much money does Jill have ?

Jill

12.

Billy

Billy needs 10 pence to buy bubbles.

a How much money does Billy have ?

b How much **more** does he need to buy the bubbles ?

13. Which **coins** could I use to buy this paper doll ?

paper doll
9p

14. **How many** of these sweets cost **more** than 6p ?

6p 8p 4p 10p 5p 9p

15. Write down the answer to :-

a 1 + 6	**b** 4 + 5	**c** 7 + 3
d 5 + 5	**e** 0 + 9	**f** 5 + 3
g 6 + 2	**h** 2 + 8	**i** 4 + 4

16. Write down the answer to :-

a 7 - 3	**b** 8 - 2	**c** 5 - 4
d 6 - 6	**e** 5 - 2	**f** 9 - 3
g 10 - 6	**h** 8 - 7	**i** 7 - 7

17. Write down the answer to :-

a 3 + 5	**b** 8 - 2	**c** 5 + 4
d 3 + 3	**e** 9 - 6	**f** 8 - 7
g 4 + 3	**h** 5 - 5	**i** 5 + 5

18. Look at Andy's sweet prices.

Find the cost of :-

a a swizzle **and** a sherbet.

b a toffee **and** a mint.

c a lolly **and** a toffee.

d a swizzle, a toffee **and** a mint.

Andy's Sweetie Shop


swizzle - 3p


toffee - 2p


mint - 5p


sherbet - 6p


lolly - 7p

19. James bought a sherbet from **Andy's**.

He handed over a 10 pence coin.

How much change will James get ?

20. Davie changes a 10 pence coin for 2 pence coins.

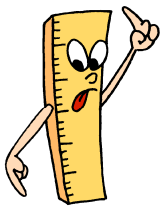
How many 2 pence coins will he get ?

21. There were 9 children in the shop. 3 of them were boys.

How many girls were there in the shop ?

22. Jackie's ruler cost her 9 pence. She paid for it with 3 coins.

Which 3 coins did Jackie use ?



23. Look at this **pattern** of numbers :-

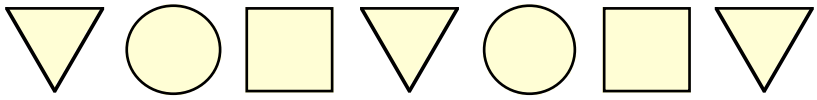
5, 6, 7, ☐ , 9, 10, 11, 12.

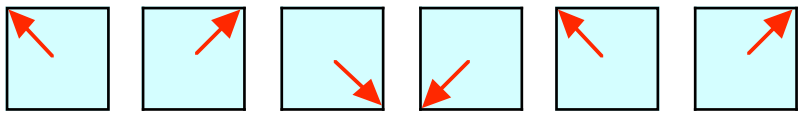
Write down the missing number.

24. What is the missing number in the pattern ?

4, 6, 8, 10, ☐ 14, 16.

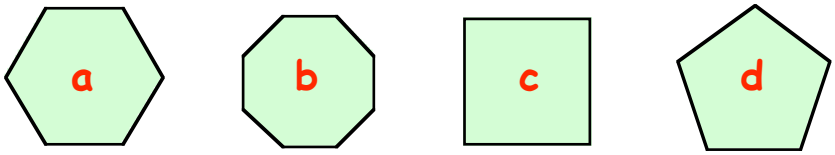
25. Draw the **next** shape in these patterns :-

a  ? .....

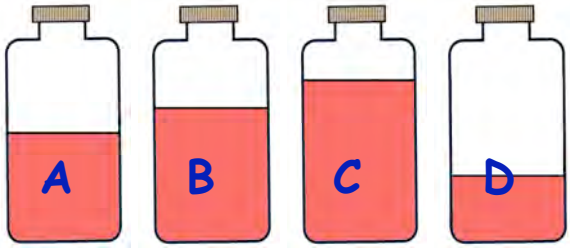
b  ? .....

26. Look at this pattern. One shape is missing.

Which of these is the missing shape in the above pattern ?

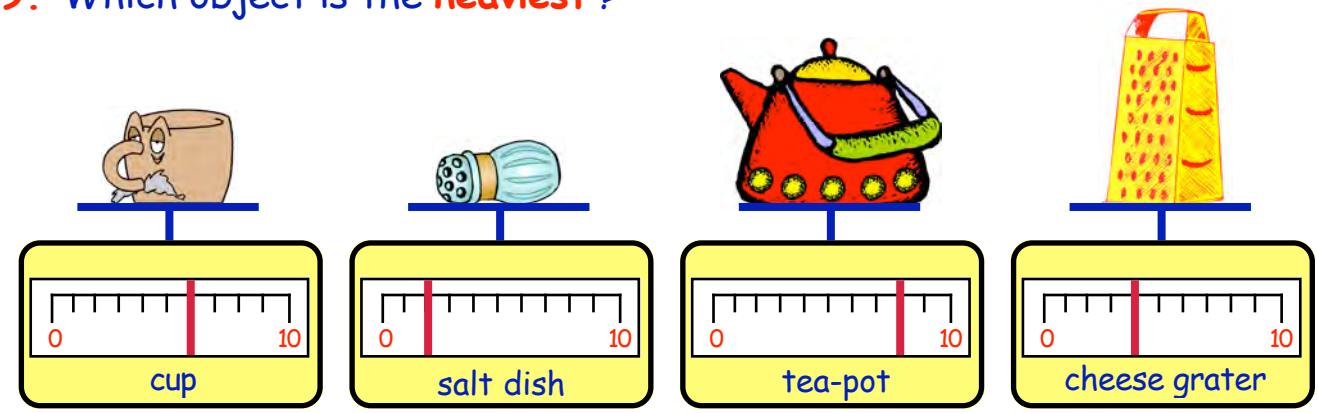


27. Which gnome is the **tallest** ?

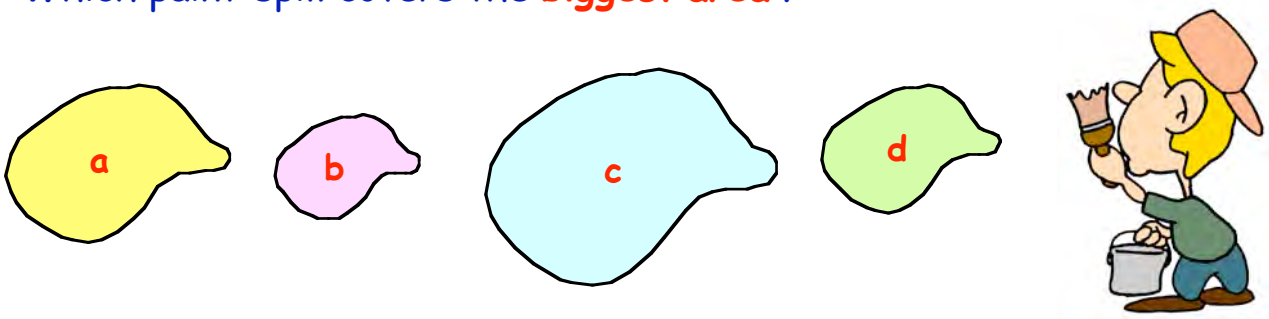
28. 

Which jar holds the **least** orange juice ?

29. Which object is the **heaviest** ?

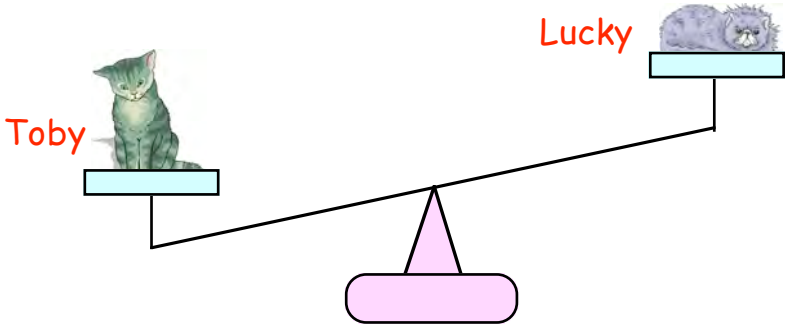


30. Which paint-spill covers the **biggest area** ?



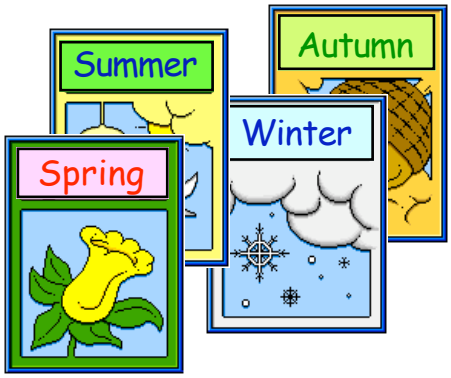
31. **Estimate** how many 1 pence coins can fit along this strip.

32. Which of these 2 cats is **heavier** ?



33. There are 4 **seasons** in a year.

Which season follows on **just after** Summer ?



34. Which day of the week comes **just before** Saturday ?

35.

What time is it on this clock face ?

36. Which of these times is nearest to **breakfast time** ?

04:00

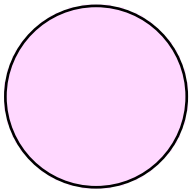
twelve o'clock

10:00

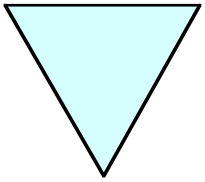
3 o'clock

37. What are these shapes called ?

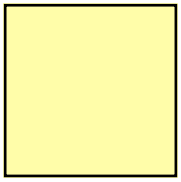
a



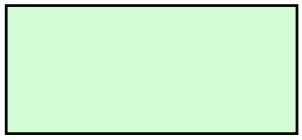
b



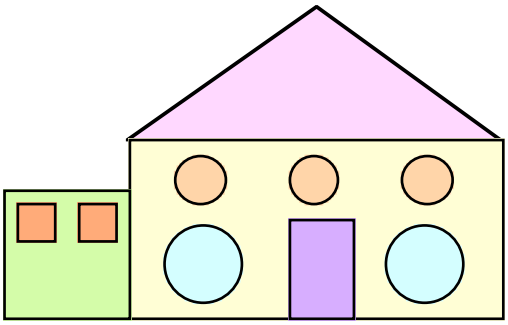
c



d



38. Look at this picture :-



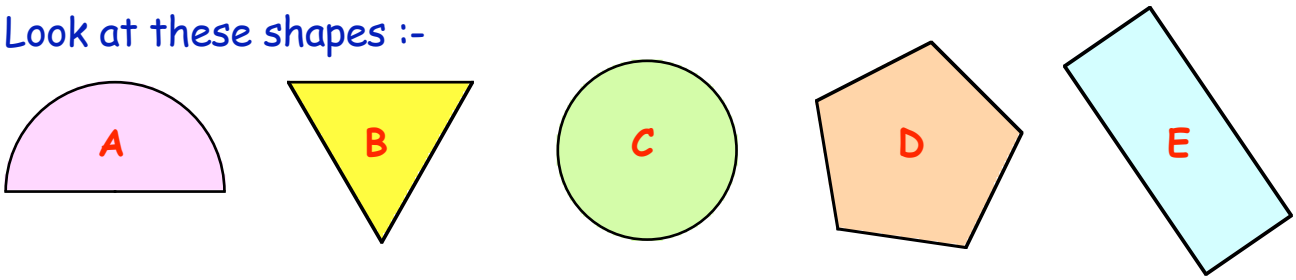
a How many **rectangles** can you see ?

b How many **squares** can you see ?

c How many **triangles** can you see ?

d How many **circles** can you see ?

39. Look at these shapes :-

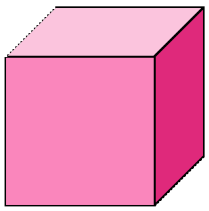


a Which shapes have only got **straight** edges ?

b Which shape has only got **curved** edges ?

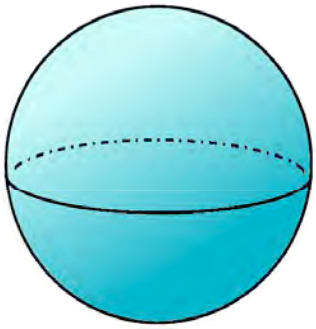
c Which shape has got **straight** and **curved** edges ?

40. What do you call this **solid** shape ?

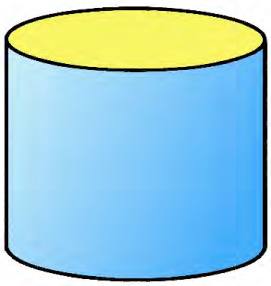


41. Name each of these **3-dimensional** shapes :-

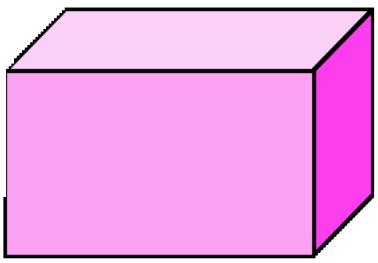
a



b



c



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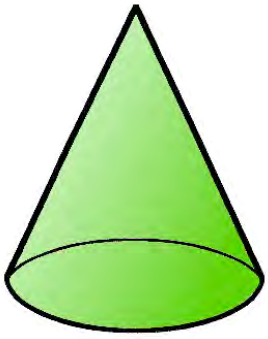
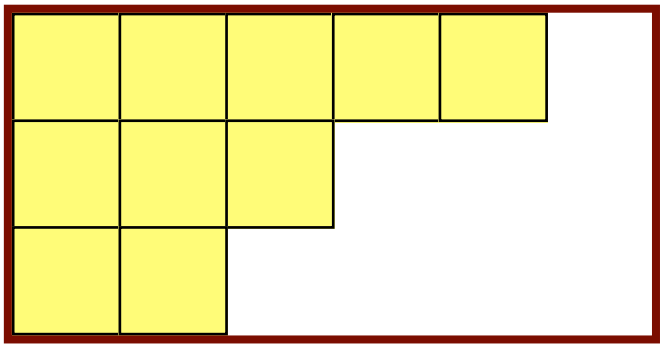
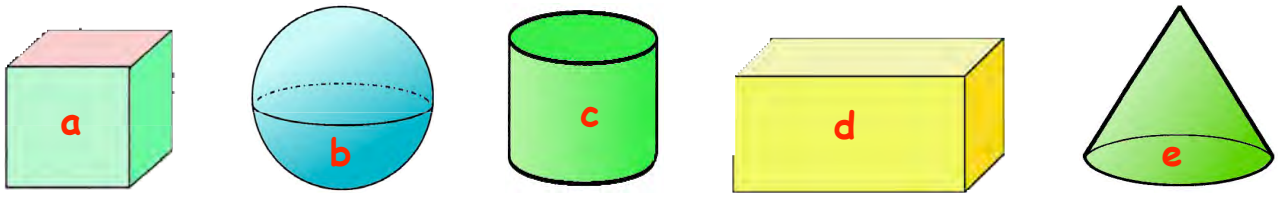


42. How many **more** yellow tiles will it take to cover this shape ?



43. Which of these shapes can be made to **roll** ?



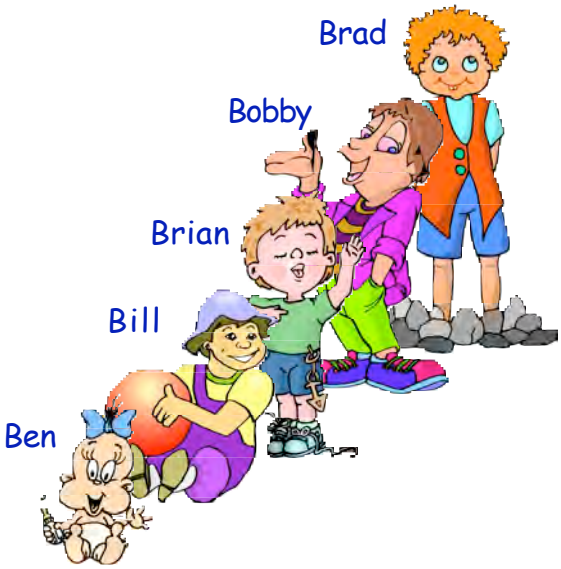
44. Look at the 5 children.

a Who is at the very **back** ?

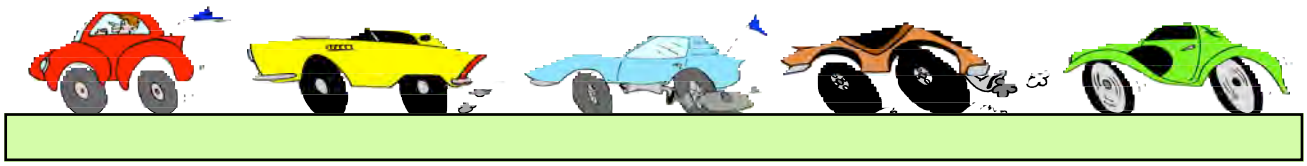
b Who is just **in front of** Bobby ?

c Who is the **youngest** ?

d Who is in the **middle** of the group ?



45. Look at the 5 racing cars below :-



a Which car is **just in front of** the brown car ?

b Which car is **just behind** the red car ?

c Which of the 5 cars is **last** ?

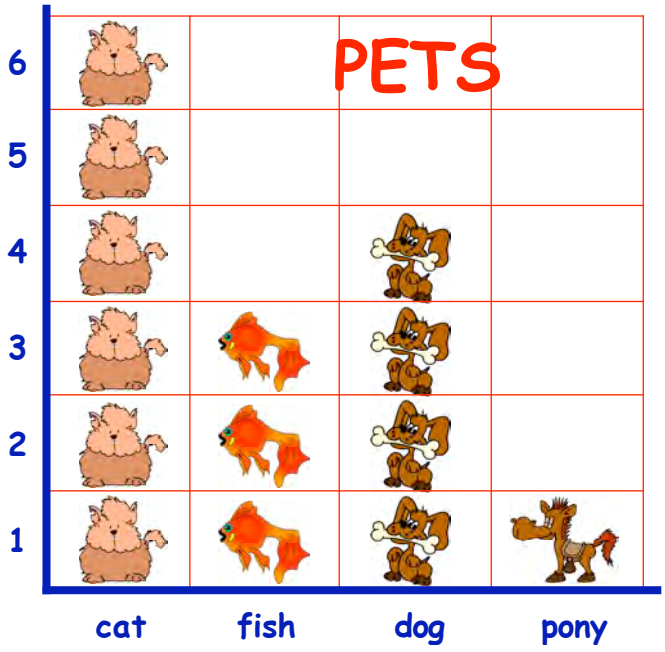
46. This graph show what pets a class of children had.

a What was the most **popular** pet ?

b How many children had a dog ?

c How many owned a pony ?

d How many **more** cats were there than fish ?



47. Five children brought a piece of fruit to school today.

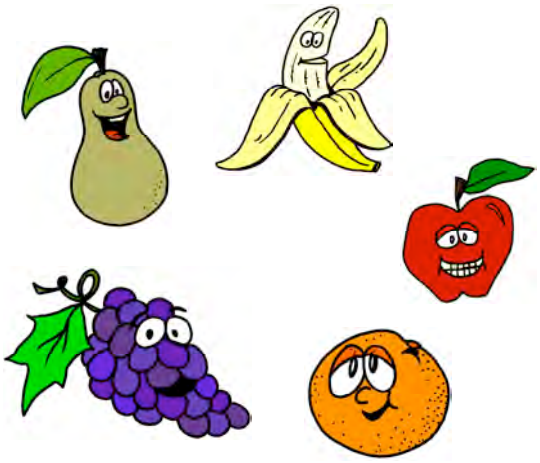
Helen brought an apple.

Sean brought an orange.

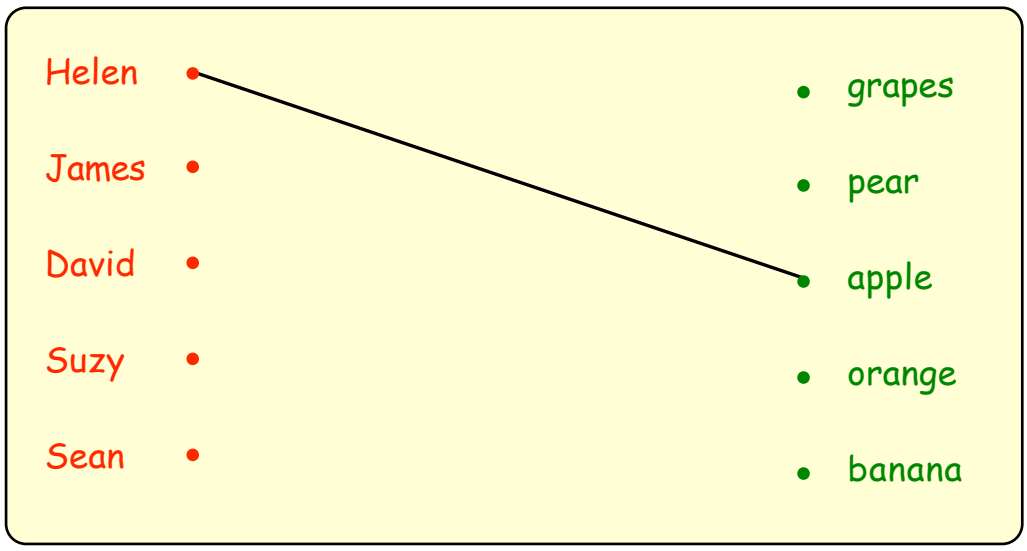
David brought a banana.

Suzy brought a pear.

James brought some grapes.



Make a **COPY** of this diagram. Finish it.



Chapter 1

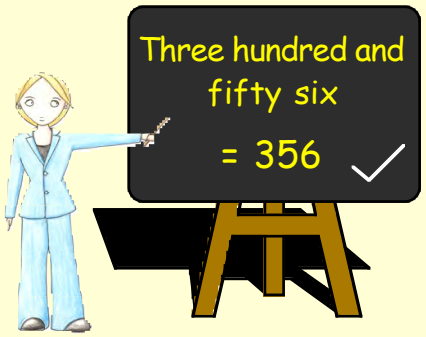
Calculators should NOT be used.

Place Values

You should be able to :-

- change a number from **words** to **digits**
- change a number back to **words**

digits just mean numbers (1, 2, 3, 4, ...)



Exercise 1

1. Write the following numbers using **digits** :-

a	thirty two	b	forty six	c	twenty nine
d	eighty three	e	fifty five	f	eighty
g	seventeen	h	seventy	i	ninety nine

2. Write the following numbers using **digits** :-

a	one hundred and twenty five	b	three hundred and sixty four
c	seven hundred and eighty one	d	four hundred and seventy two
e	eight hundred and sixty six	f	nine hundred and seventeen
g	four hundred and thirty	h	six hundred and ten
i	seven hundred and eight	j	nine hundred and ninety nine

3. Write these numbers using **words** :-

a	67	b	42	c	35	d	28
e	80	f	77	g	135	h	326
i	979	j	402	k	510	l	600

Worksheet 1·1

4. John has collected **123** football stickers.

Write this number in **words**.

5. John's friend, Graeme, has **two hundred and one** stickers.

Write this number using **digits**.

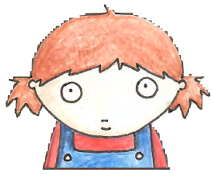
6. Write the number that comes **just after** :-

a 38	**b** 55	**c** 17	**d** 69
e 92	**f** 103	**g** 267	**h** 709
i 987	**j** 589	**k** 399	**l** 999

7. Write the number that comes **just before** :-

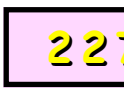
a 43	**b** 67	**c** 86	**d** 92
e 71	**f** 50	**g** 456	**h** 529
i 731	**j** 420	**k** 850	**l** 700

8. Lucy won a prize with ticket number 227.



Ravi had the ticket that came **just before** Lucy's.

What was Ravi's ticket number ?



Worksheet 1·2

9. Put each of these groups of numbers in the correct order.

Start with the **lowest**.

a 26, 59, 43, 17

b 85, 67, 99, 58, 47

c 60, 58, 64, 55, 61

d 185, 166, 170, 188, 159

e 206, 199, 352, 417, 299 **f** 572, 295, 367, 524, 404

g 903, 478, 655, 219, 700 **h** 358, 835, 385, 538, 853.

10. Put each of these groups of numbers in the correct order.

Start with the **largest**.

a 18, 42, 37, 26 **b** 44, 63, 59, 21, 33

c 108, 124, 167, 130, 119 **d** 381, 95, 240, 99, 101

e 798, 803, 830, 789, 800 **f** 147, 714, 417, 741, 174.

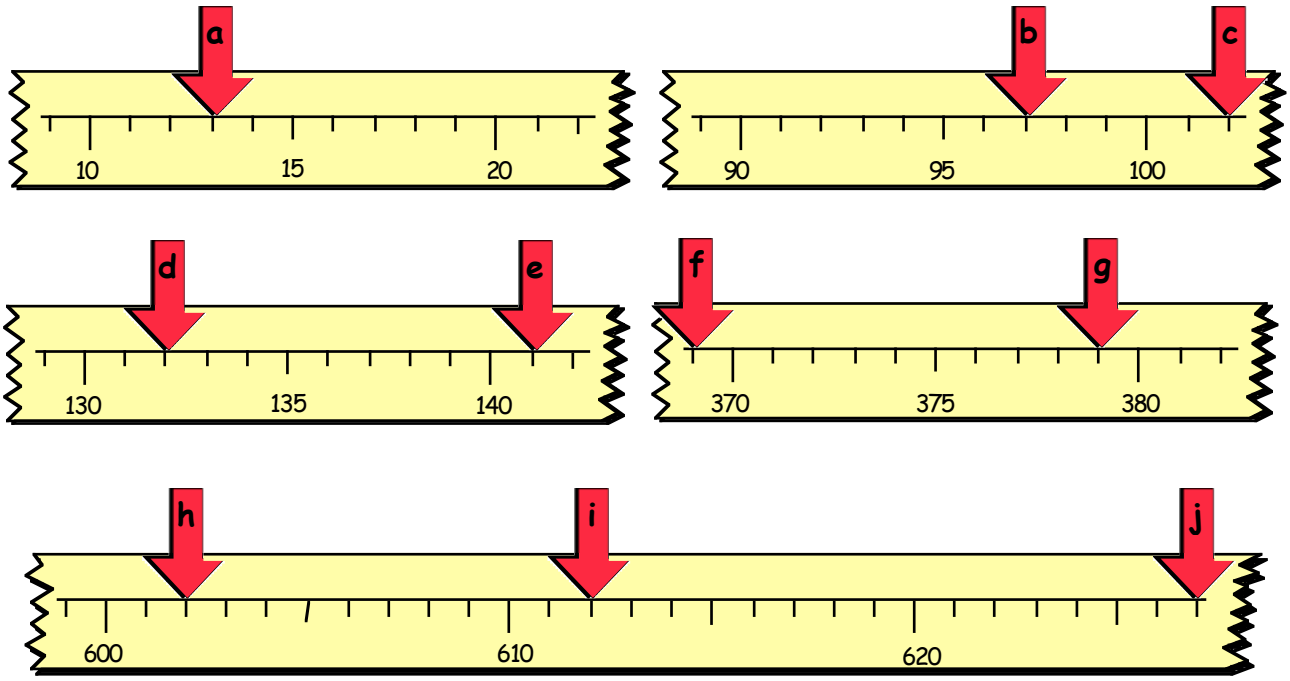
11. Grandpa Jones is aged 88. Aunt Mary is 93. Uncle Tom is 86

Grandma White is 79. Uncle Fred is 80. Aunt Nan is 96.

a Who is the **oldest** ?

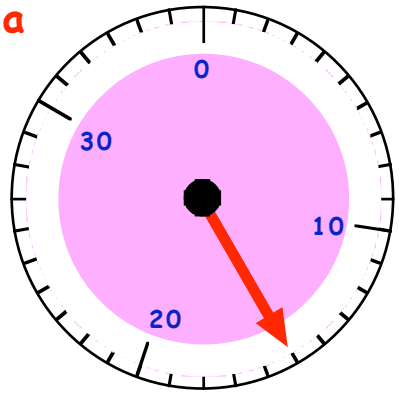
b Who is the **youngest** ?

12. To what numbers are the arrows pointing ?

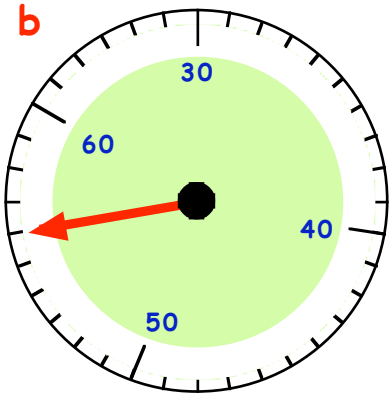


13. What numbers are shown on these dials ?

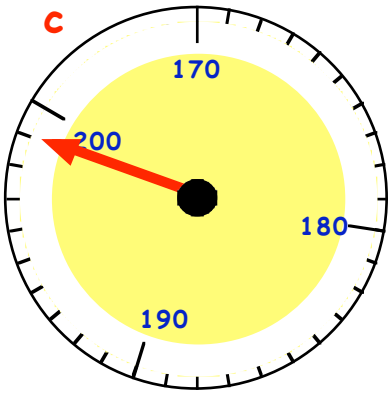
a



b



c

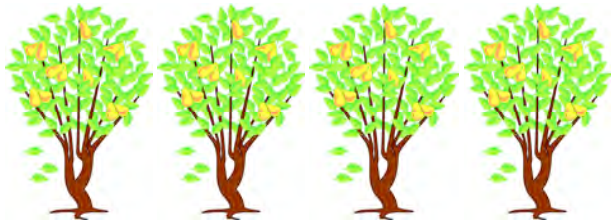


14. Five hundred and eighty three people go to a pop festival.

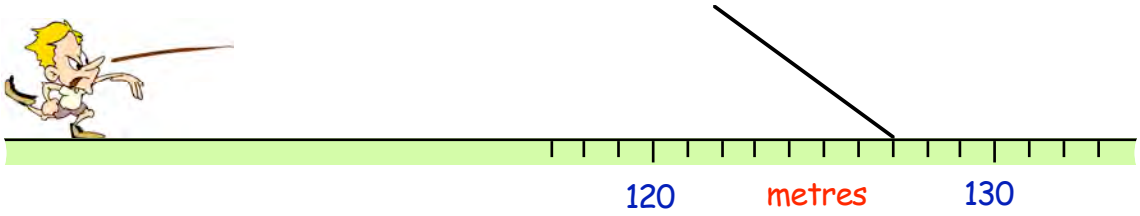
Write this number using **digits**.

15. 301 trees were planted in the park.

Write this number in **words**.

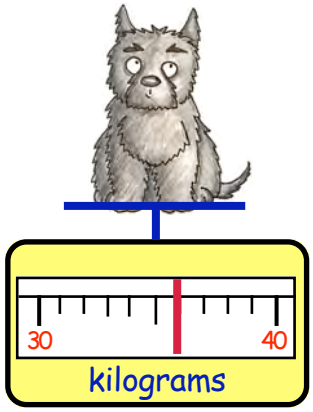


16. Paul threw the javelin.



How far did it travel ?

17. How heavy is **Spot** the dog ?

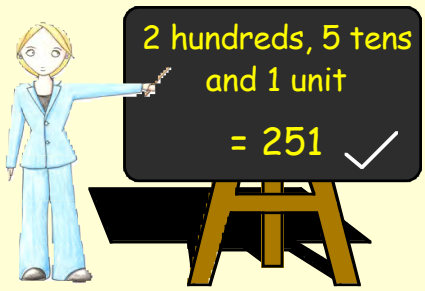


Worksheet 1·3

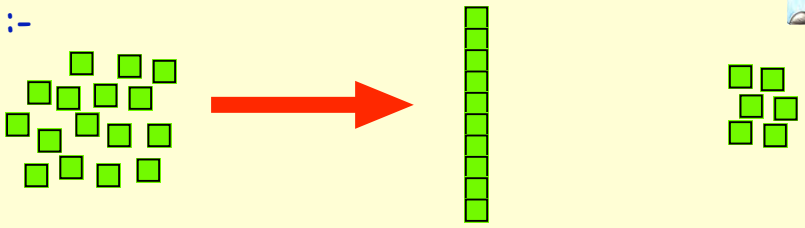
Hundreds, Tens and Units

The number that is made up of

- 3 tens and 9 units is => 39
- 2 hundreds, 5 tens and 1 unit is => 251



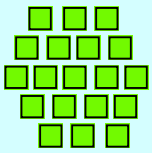
Also :-



16 = 1 ten and 6 units

Exercise 2

1. Copy this picture and finish it :-



19 = ... ten and ... units

2. Copy each of these and finish them :-

a 18 = 1 ten and ☐ units

b 32 = 3 tens and ☐ units

c 78 = 7 tens and ☐ units

d 43 = ☐ tens and ☐ units

e 56 = ☐ tens and ☐ units

f 90 = ☐ tens and ☐ units

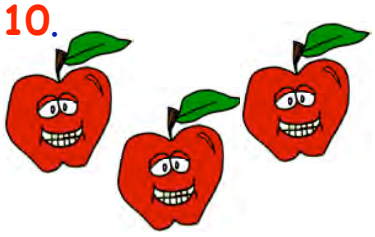
g 99 = ☐ tens and ☐ units

h 81 = ☐ tens and ☐ units

3. I have 46 apples. I wish to pack them in boxes of 10.

a How many full boxes of 10 can I make ?

b How many apples will I have left over ?



4. David has 75 pennies in his piggy bank.

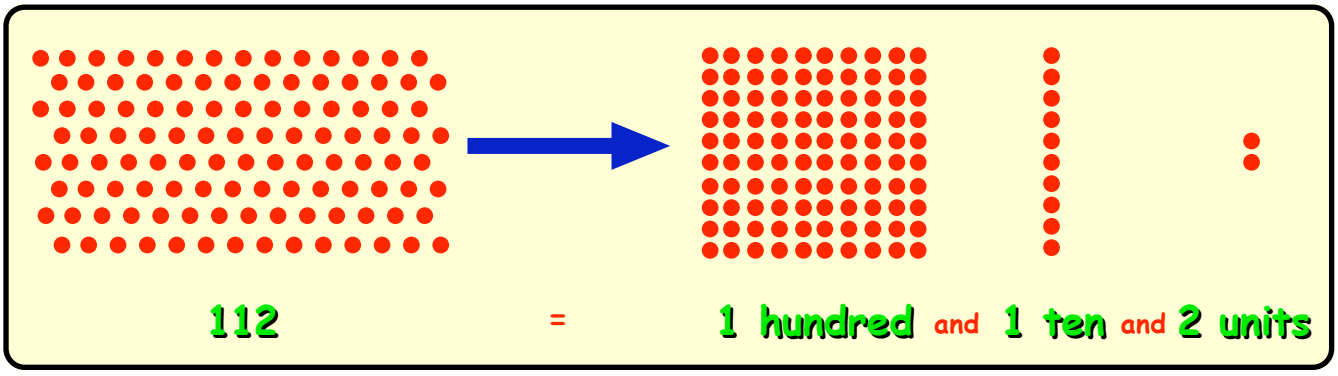
He changes them for 10p coins.

a How many 10p coins will David get ?

b How many pennies will he be left with ?

Worksheet 1·4

5. This picture shows that 112 = 1 hundred, 1 ten and 2 units.



Copy and finish :- 125 = 1 hundred, ... tens and ... units.

6. Do the same with these :-

a 326 = ... hundreds, 2 tens and ... units.

b 569 = ... hundreds, ... tens and ... units.

c 403 = ... hundreds, ... tens and ... units.

d 799 = ... hundreds, ... tens and ... units.

e 650 = ... hundreds, ... tens and ... units.

7. Do the same with these numbers :-

a 387	b 626	c 508	d 910
e 269	f 500	g 283	h 444

8. Billy saved 1 pence coins. He had **473** of them.

Every 100 coins can be changed for a **£1 coin**.

a How many **£1 coins** will Billy get for his 473 pence ?

He then changes his 73 pence for **10p coins**.

b How many **10p** coins will Billy get for his 73 pence ?

c How many **1 pence** coins will Billy then be left with ?

9. How many **£1** coins and how many **10p** coins can be exchanged for :-

a 234p	**b** 526p	**c** 851p	**d** 950p
e 777p	**f** 680p	**g** 403p	**h** 300p

10. How many **1p** coins would I get for each of these :-

a £1 and 53p

b £2 and 36p

c £5 and 80p

d £4 and 61p

e Two 10p coins and one 5p coin.

f A £1 coin and four 10p coins.

g Three £1 coins, six 10p coins and one 2p coin.

11. Nick opens his piggy bank.

He has **three** £1 coins, **five** 10p coins and **seven** 1p coins.

How much does Nick have ?

12. Jane and Jemma empty their pockets.

Together, they have **five** £1 coins, **eight** 10p coins and **four** 1p coins.

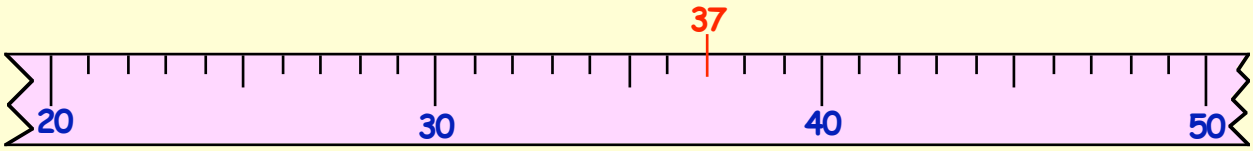
How much have they got altogether ?

Worksheet 1·5

Rounding to the nearest 10

Look at the scale below.

It shows that the number **37** lies between **30** and **40**.



The **37** can be seen to be **closer** to **40** than to **30**.

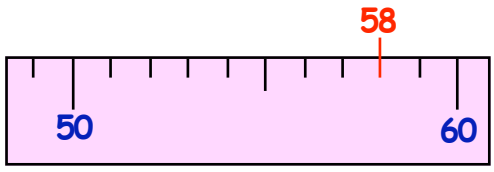
We say that "**37**, rounded to the nearest 10, is **40**"

Exercise 3

Worksheet 1·6

1. Let us look at the number **58**.

Copy these sentences and complete :-



"**58** lies between **50** and ..."

"**58** is closer to ... than it is to **50**"

"**58**, rounded to the nearest 10, is ...."

2. A short way of writing this is **58 → 60**. (58 rounds to 60)

Copy each number and round it **to the nearest 10** :-

a 27 → 30	**b** 32	**c** 67	**d** 91
e 19	**f** 48	**g** 79	**h** 52
i 127	**j** 182	**k** 249	**l** 288

3. We can **estimate** answers to sums using rounding. **Copy** and complete :-

a **37** + **49** is about the same as **40** + **50** which is about **9**...

b **29** + **42** is about the same as **30** + ... which is about ....

c **59** + **18** is about the same as ... + ... which is about ....

Worksheet 1·7

Topic in a Nutshell

1. Write these numbers using **digits** :-

   a thirty two **b** seventy five

   c eighty **d** five hundred and sixty nine

   e two hundred and eight **f** nine hundred and seventy.

2. Write these numbers using **words** :-

   a 64 **b** 480 **c** 603 **d** 70.

3. At a football match there were **893** people.

   Write this number in **words**.

4. 

   In a lake there were **two hundred and five** flamingos.

   Write this number in **digits**.

5. Write down the number that comes **just after** :-

   a 69 **b** 326 **c** 888 **d** 199.

6. Write down the number that comes **just before** :-

   a 90 **b** 767 **c** 801 **d** 400.

7. In a prize draw, Ben won with ticket number **389**.

   Jo had the ticket number that came **just after** Ben's.

   What was Jo's ticket number ?

8. Write these numbers out **in order**. Start with the **smallest**.

267	389	126	58

9. Write these numbers out **in order**. Start with the **largest**.

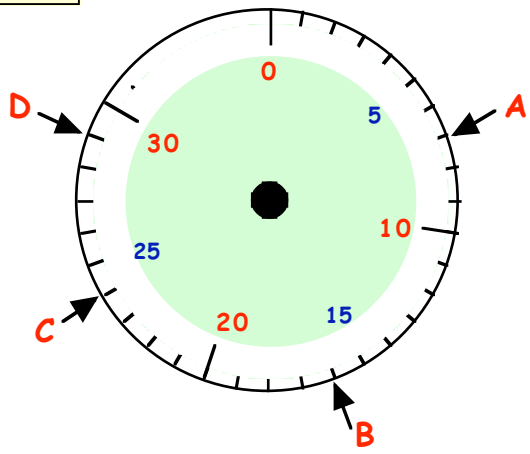
401	527	31	628

10. **a** What number is arrow **A** pointing to ?

b What number is arrow **B** pointing to ?

c What number is arrow **C** pointing to ?

d What number is arrow **D** pointing to ?



11. 

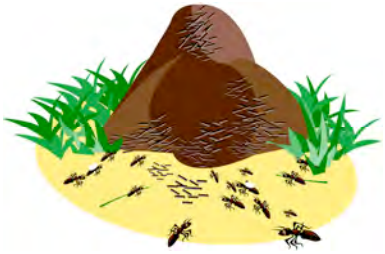
Amy sat in a bath of beans for charity.

There were **9 8 1** beans in her bath.

Write this number in **words**.

12. There are **five hundred and thirty seven** ants in an ant hill.

Write this number using **digits**.



13. **29** is made up of 2 **tens** and 9 **units**.

Write these numbers in the same way :-

a **46** = ... tens and ... units **b** **58** = ... tens and ... units.

14. **326** is made up of 3 **hundreds**, 2 **tens** and 6 **units**.

Write this number in the same way :-

527 = ... hundreds, ... tens and ... units.

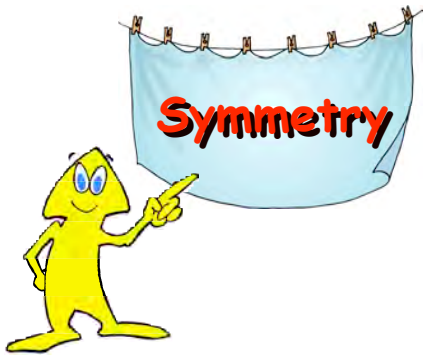
15. Write down the number made from :-

a 6 tens and 4 units **b** 5 hundreds, 3 tens and 9 units.

16. **Round these numbers to the nearest 10** :-

a 59 **b** 82 **c** 18 **d** 67.

Chapter 2

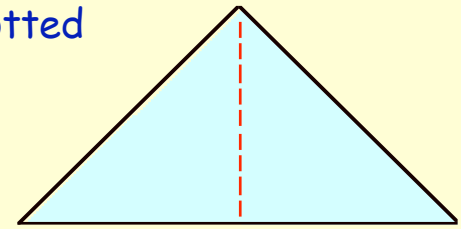


Symmetry

When a shape is folded along a line and the 2 parts match exactly, the shape is said to have **symmetry** (or be **symmetrical**).

If this shape is folded over the red dotted line, each part is exactly the same.

This shape is **symmetrical**.

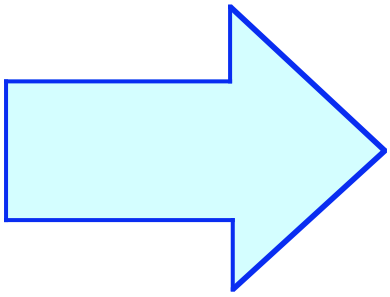


Exercise 1

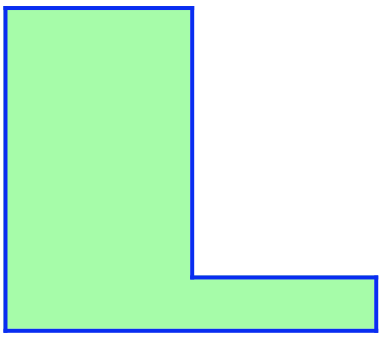
Worksheet 2·1 Worksheet 2·2

1. Do these shapes have **symmetry** ? (Write **Yes** or **No**.)

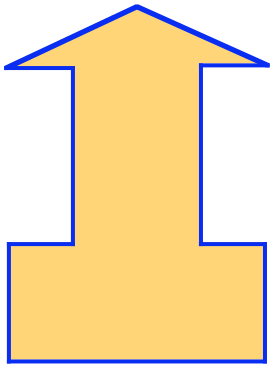
a



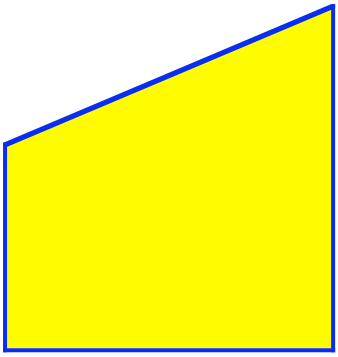
b



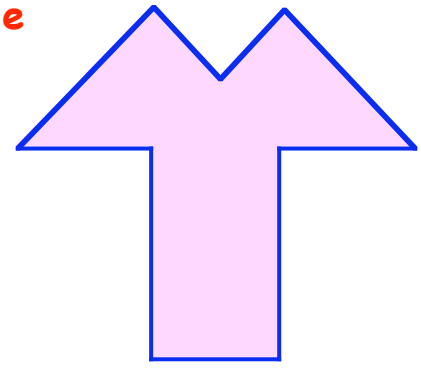
c



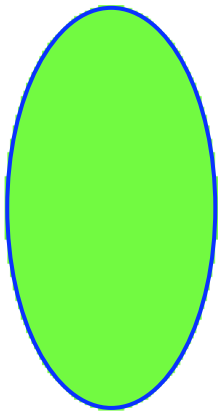
d



e



f



Symmetry can also be found using a **mirror**.

A mirror is placed on this picture of a beetle.

The **bit** on the right looks the same as the **bit** on the left.

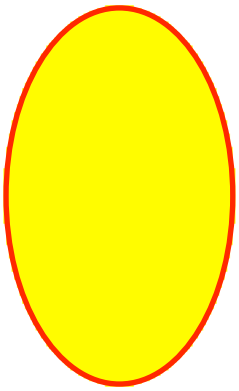
The mirror shows the picture is **symmetrical**.

Use a **mirror** to check your answers to question 1 on the last page.

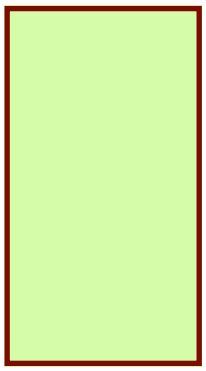
Worksheet 2·3

2. Which of these shapes are **symmetrical ? (Use a mirror)**.

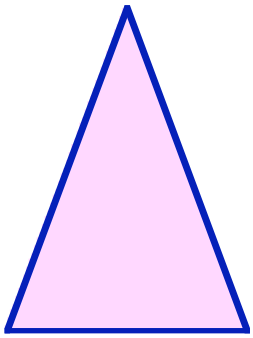
a



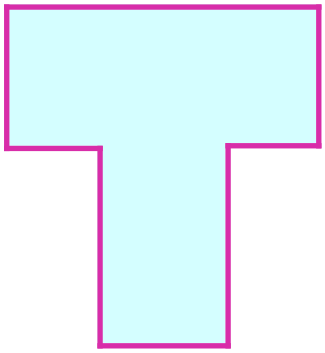
b



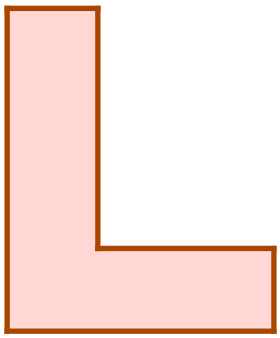
c



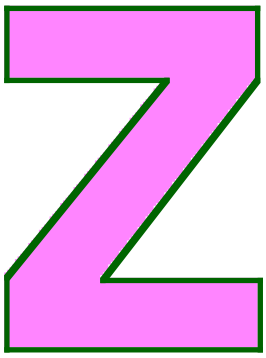
d



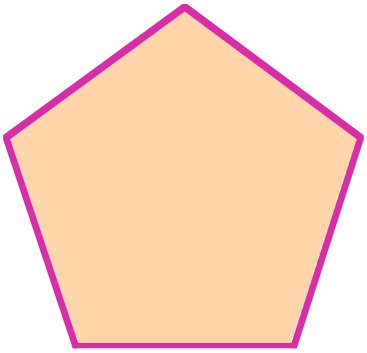
e



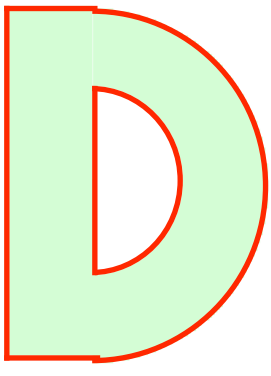
f



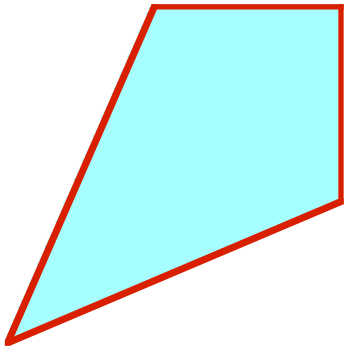
g



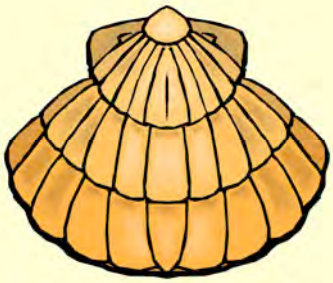
h

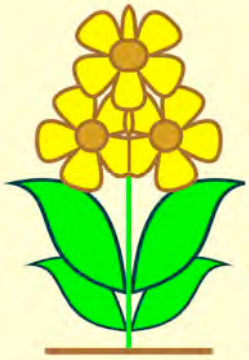


i



Symmetry can also be found in nature.

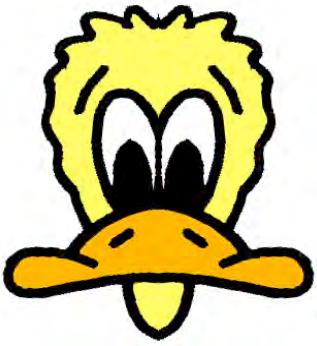




3. Use a mirror to check that the shell, butterfly and flower above are **symmetrical**.

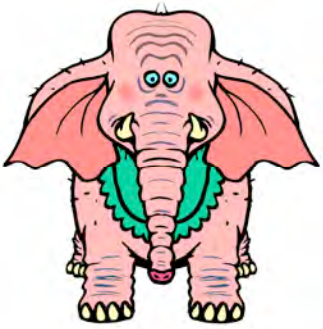
4. Which of these **objects** are **symmetrical ? (Use a mirror)**.

a



b

c

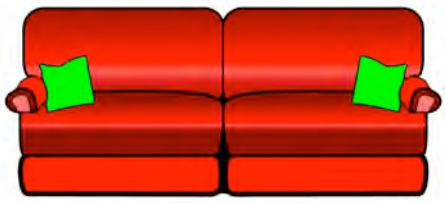


d

e

f

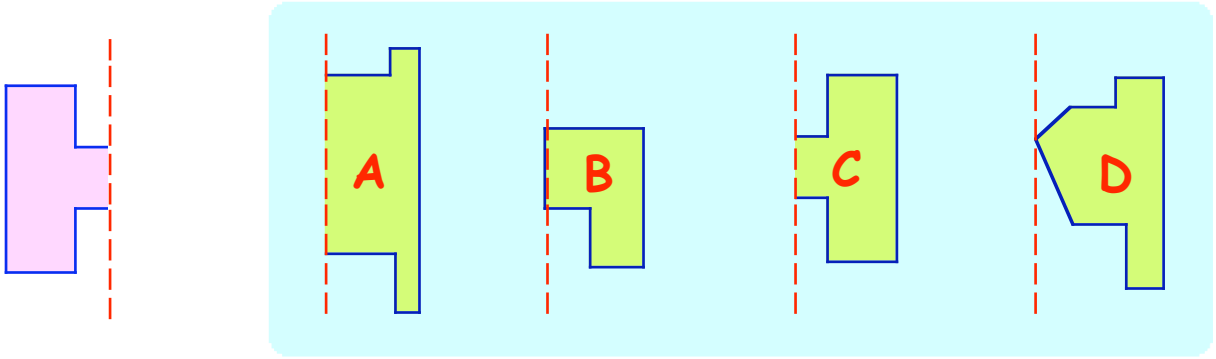
g



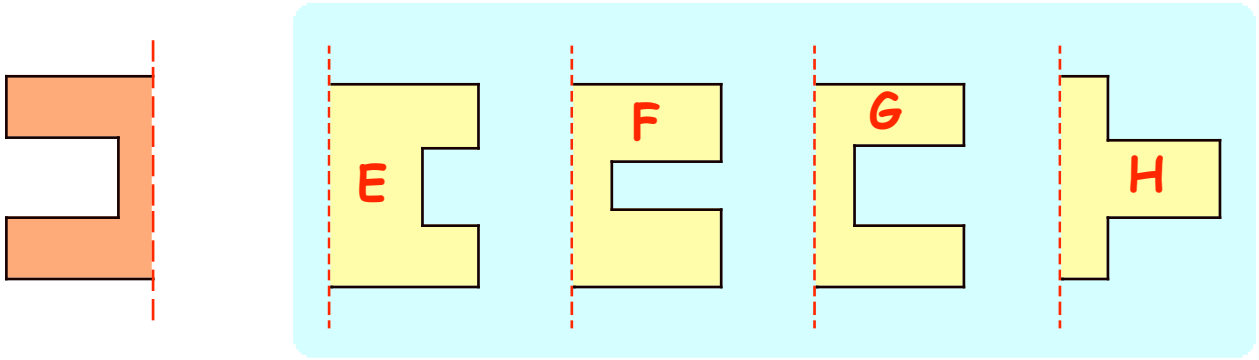
h

i

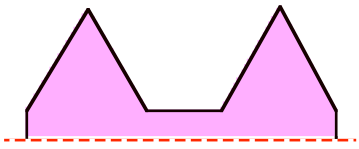
5. Which of the four shapes, (A, B, C or D), should be added to the pink shape to make it symmetrical ?

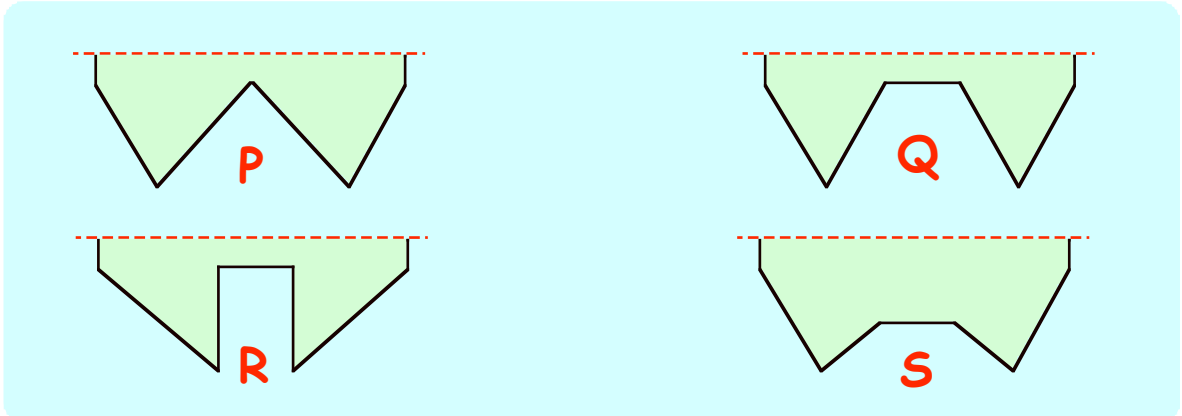


6. Which of the four shapes, (E, F, G or H), should be added to the orange shape to make it symmetrical ?



7. Which of the four shapes, (P, Q, R or S), should be added to the purple shape to make it symmetrical ?



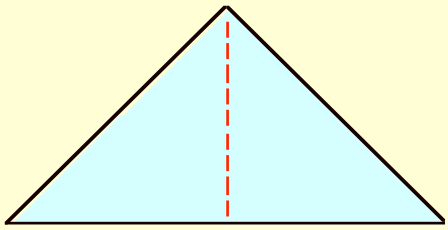


Worksheet 2·4

Line Symmetry

When this shape is folded along the red dotted line, it is found to be **symmetrical**.

This dotted line is called a **line of symmetry**.

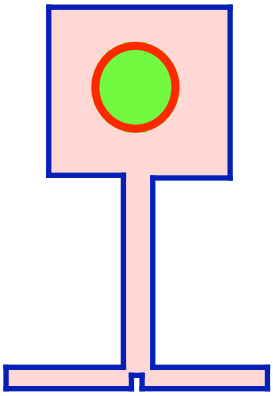


Exercise 2

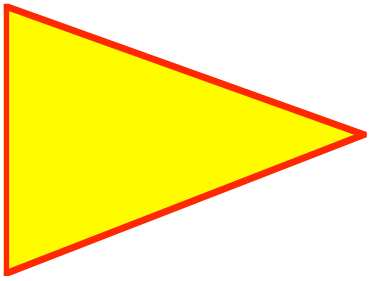
Worksheet 2·5

1. Which of these shapes have line **symmetry** ?

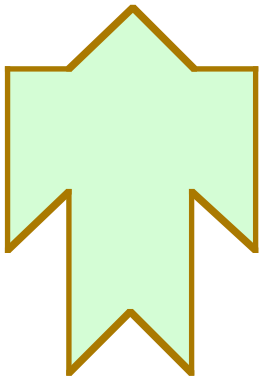
a



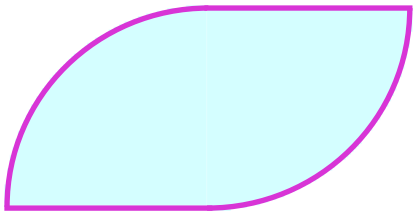
b



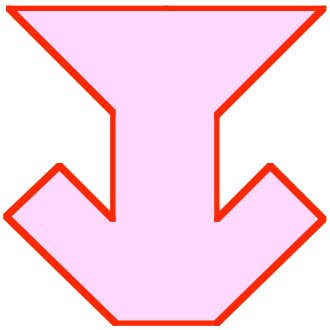
c



d



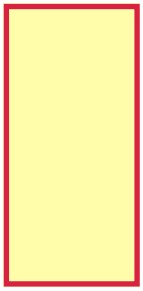
e



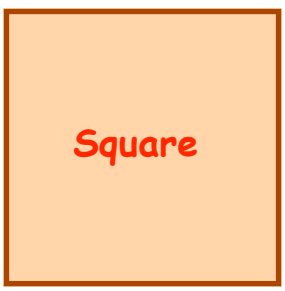
f

2. How many **lines of symmetry** do these shapes have ?

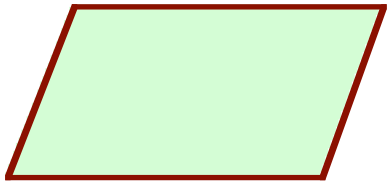
a



b

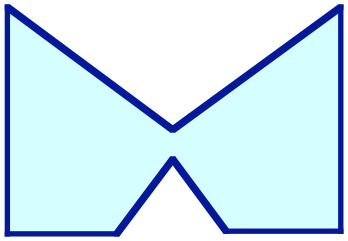


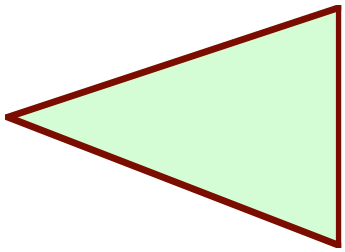
c

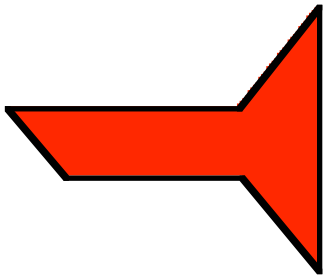


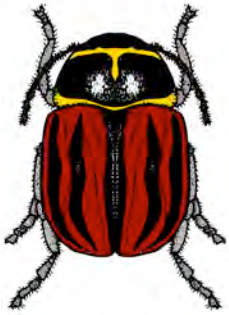
Topic in a Nutshell

1. Do these shapes have **symmetry** ? (Write **Yes** or **No**.)

a 

b 

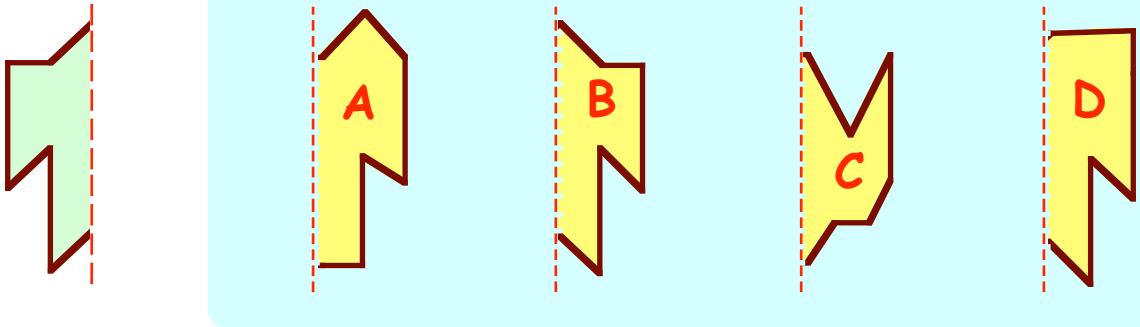
c 

d 

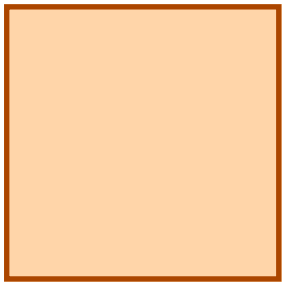
e 

f 

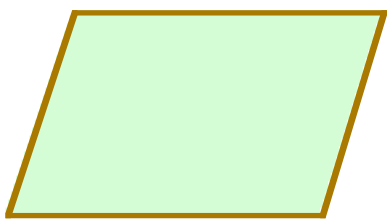
2. Which of the four shapes, (**A**, **B**, **C** or **D**), should be added to the green shape to make it **symmetrical** ?

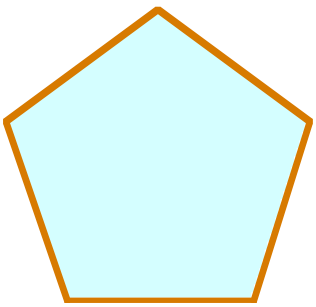


3. How many **lines of symmetry** do these shapes have ?

a 

square

b 

c 

Chapter 3

Calculators should NOT be used.

Addition

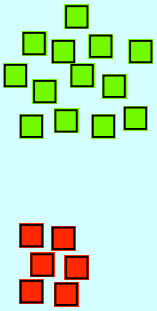
Using **counters** can help when adding.

Example What is 13 add 6 ?

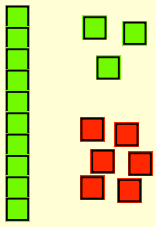
13

add

6



=



1 ten 9 units

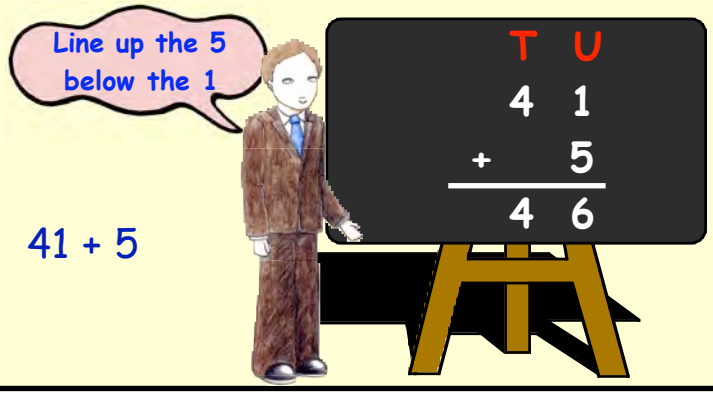
= 19

This can be written as :-

	T	U
	1	3
+		6
	1	9

When **adding**, you must **line up** the numbers.

Example **Add :-** 41 + 5



Exercise 1

Worksheet 3·1

1. **Copy** and **complete** :- (You may use counters to help you).

a	b	c	d
43 + 3	27 + 1	56 + 3	23 + 6

e	13 + 4	**f**	36 + 2	**g**	92 + 4	**h**	55 + 3
i	23 + 3	**j**	3 + 12	**k**	4 + 31	**l**	53 + 5

2. Set the sums down like those above and **find** :-

a	47 + 2	**b**	7 + 40	**c**	18 + 1	**d**	94 + 3
e	15 + 4	**f**	20 + 8	**g**	33 + 5	**h**	82 + 7

3. Jemma bought nuts and an ice cream.

How much did she spend **altogether** ?

8p

41p

4.

Ravi spent **32p** on juice and **7p** on sweets.

How much did he spend **altogether** ?

5. A circus had **12** lions and **6** elephants.

What was the **total** number of animals ?

6. The school library lent **23 books** to Primary 1 and **5** to Primary 2.

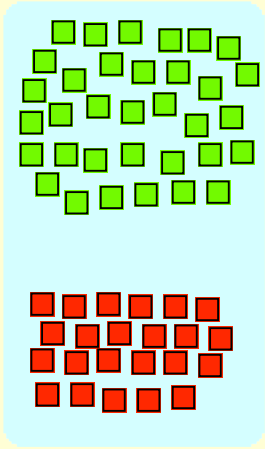
How many books did the library lend in **total** ?

Example What is 34 add 23 ?

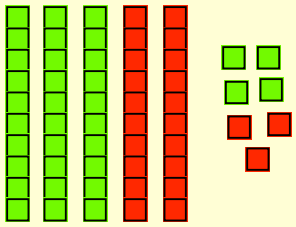
34

add

23



=



5 tens 7 units

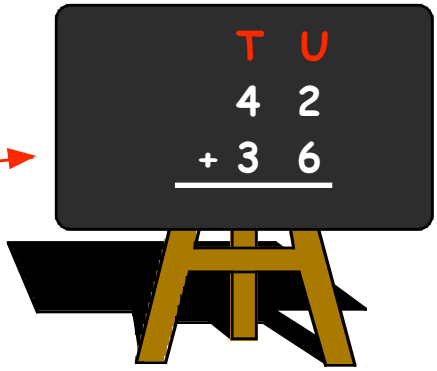
= 57

This can be written as :-

	T	U
	3	4
+	2	3
	5	7

Remember you **must** line up the numbers.

Worksheet 3·2



7. **Copy** and **complete** this calculation.
(You may use counters to help you.)

8. **Copy** and **complete** :-

a	18 + 11	b	22 + 13	c	14 + 13	d	15 + 12
e	52 + 13	f	27 + 21	g	37 + 21	h	44 + 45
i	49 + 30	j	37 + 22	k	73 + 14	l	55 + 34

Remember to set the sums down by lining up the numbers correctly

9. Find :-

a	17 + 10	**b**	27 + 11	**c**	25 + 14	**d**	47 + 32
e	42 + 22	**f**	57 + 20	**g**	73 + 25	**h**	47 + 52

10.

Lucy scored **43 goals** last month.

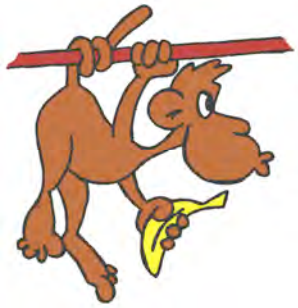
This month she scored **33 goals**.

How many goals in **total** ?

11. Gaby ate **33** peanuts. John ate **24** peanuts.

How many peanuts in **total** ?

12.



The safari park monkeys ate **26** bananas yesterday and **11** today.

How many bananas **altogether** ?

13. Jane has **23** ribbons, Jemma has **26**. How many ribbons **altogether** ?

14. The safari park has **25 lions** and **14 tigers**.

How many is this **altogether** ?

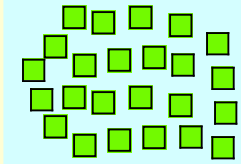
Addition (with carrying)

Example What is 24 add 8 ?

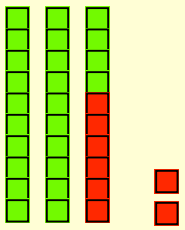
24

add

8



=



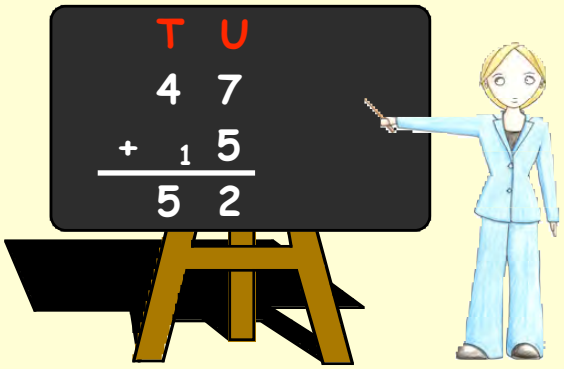
3 tens 2 units

= 32

This can be written as :-

	T	U
	2	4
+	1	8
	3	2

8 + 4 = 12 = 2 units carry 1 (ten)



It is **VERY** important to line the numbers up properly.

Remember to add the number you have **carried**.

Exercise 2

Worksheet 3·3

1. **Copy** and **complete** :- (You may use counters to help you).

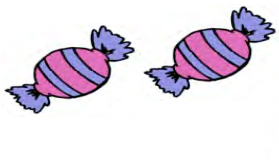
a	48 + 3	b	29 + 4	c	59 + 7	d	37 + 8
e	33 + 9	f	89 + 4	g	27 + 8	h	49 + 3
i	47 + 5	j	6 + 36	k	83 + 8	l	9 + 49

2. Set down these sums as shown in question 1 and find :-

a 49 + 8	**b** 87 + 7	**c** 65 + 7	**d** 52 + 9
e 67 + 5	**f** 53 + 9	**g** 32 + 8	**h** 66 + 4

3. Joy bought a paper for **43p** and sweets for **9p**.

How much did they cost **altogether** ?



4.

In a netball game, Katie scored **26** and Lucy scored **6** points .

How many points **altogether** ?

5. Ben has **27** CD singles and **5** CD albums.

What is Ben's **total** number of CD's ?

6.

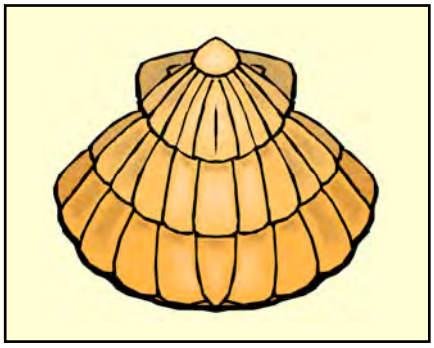
Ravi has **17** toy cars and Katie has **8**.

Find the **total** number of cars.

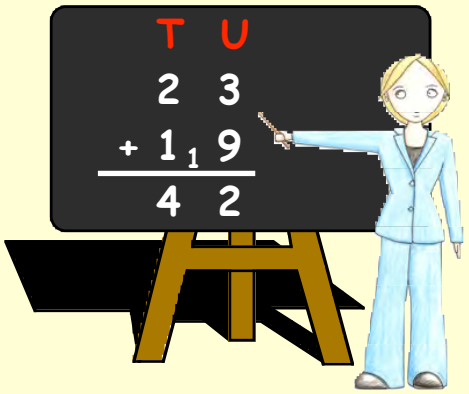
7. Jane collected **56** shells on the beach.

Jemma collected **8** shells.

How many shells did they collect in **total** ?



23 + 19 = 42 This can be written as :-



It is **VERY** important to line the numbers up properly.

Remember to add the number you have **carried**.

Worksheet 3·4

8. **Copy** and **complete** :- (You may use counters to help you).

a	57 + 24	**b**	48 + 13	**c**	56 + 24	**d**	69 + 23
e	37 + 29	**f**	31 + 49	**g**	44 + 37	**h**	78 + 13
i	35 + 37	**j**	48 + 45	**k**	63 + 28	**l**	29 + 49

9. Set down the sums like those above and find :-

a	49 + 27	**b**	78 + 16	**c**	35 + 15	**d**	18 + 69
e	47 + 35	**f**	53 + 29	**g**	32 + 49	**h**	56 + 39

10. Ben bought a pencil for **18p** and a comic for **66p**.

How much did they cost **altogether** ?

11.

Nick bought a double CD album.

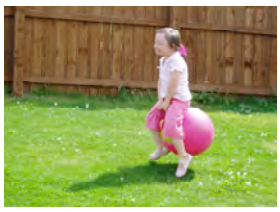
CD 1 had **34** songs. CD 2 had **28** songs.

How many songs **altogether** ?

12. A school cupboard has **17** boxes of coloured markers and **45** boxes of black markers.

How many boxes of markers in **total** ?

13.



Brontë jumped **48** times on her spacehopper.

She then jumped another **29** times.

Find the **total** number of jumps.

14. A game of darts was played by some children.

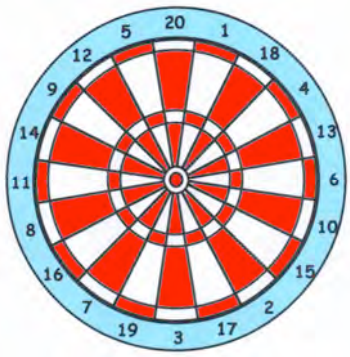
Ben scored **48** points then **37** points.

Ravi scored **26** points then **59** points.

a How many points did **Ben** score in **total** ?

b How many points did **Ravi** score in **total** ?

c Who scored **more** points ?



Exercise 3 Mixed examples

1. **Copy** and **complete** :- (You may use counters to help you).

a	53 + 6	**b**	42 + 6	**c**	36 +12	**d**	41 + 13
e	37 + 22	**f**	33 + 45	**g**	44 + 15	**h**	46 + 15
i	27 + 16	**j**	36 + 16	**k**	55 + 27	**l**	29 + 68

2. Set down the sums like those above and find :-

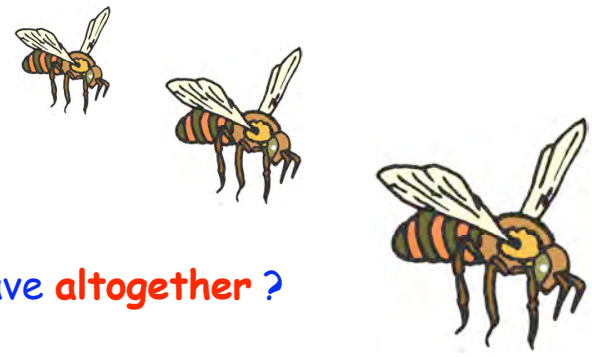
a	23 + 5	**b**	43 + 6	**c**	24 + 13	**d**	14 + 65
e	36 + 5	**f**	57 + 8	**g**	33 + 9	**h**	18 + 16
i	47 + 14	**j**	49 + 3	**k**	55 + 29	**l**	29 + 39

3. Mr. Honey has two bee hives.

Hive 1 has **47 bees**.

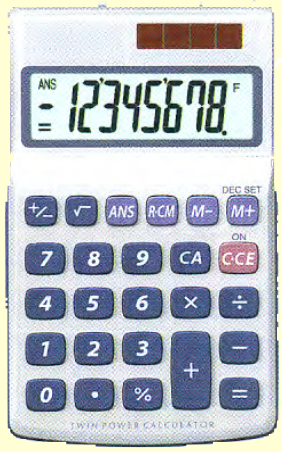
Hive 2 has **36 bees**.

How many bees does Mr. Honey have **altogether** ?



Using a calculator

Find these buttons on your calculator :-



[+] this means **add**

[=] this means **equals**

Examples :-

Tap in **27** [+] **36** [=] —> The answer is **63**.

126 [+] **68** [=] —> The answer is **194**.

Exercise 4

1. a **Tap in** **46** [+] **28** [=]. Write down your answer.

   b **Tap in** **115** [+] **37** [=]. Write down your answer.

2. **Find** :-

a	28 + 19	b	59 + 42	c	76 + 49	d	23 + 76
e	123 + 52	f	147 + 39	g	134 + 49	h	152 + 39
i	66 + 110	j	56 + 138	k	137 + 109	l	229 + 179

3. Max scores **142** points, **76** points and **102** points on his video game.

   What are his points **altogether** ?

Topic in a Nutshell

1. **Find** :-

a	33 + 5	**b**	46 + 3	**c**	42 + 24	**d**	55 + 42
e	32 + 6	**f**	8 + 61	**g**	23 + 15	**h**	74 + 24

2. Mr. Todd has **26** DVD films and **23** video films.

   What is the **total** number of films ?

3. **Find** :-

a	36 + 5	**b**	58 + 9	**c**	27 + 15	**d**	55 + 28
e	55 + 8	**f**	8 + 36	**g**	24 + 48	**h**	37 + 48

4. Miss Woods has **36** blue pens and **27** black pens.

   What is the **total** number of pens ?

You may use a calculator for question 5.

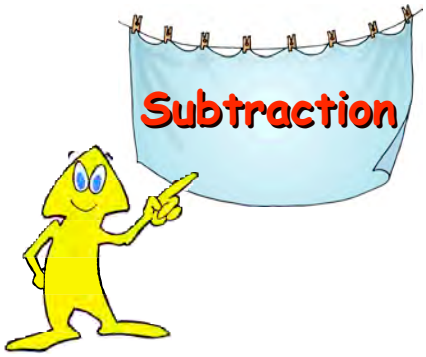
5. Ravi has **66** crayons. Jane has **137** crayons. Ben has **108** crayons.

   a How many crayons do Ravi and Jane have **in total** ?

   b What is the **total** number of crayons ?

Chapter 4

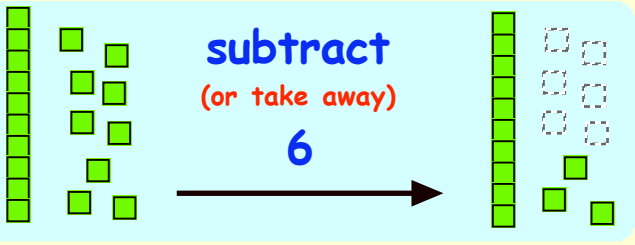
Calculators should NOT be used.



Subtraction

Using counters can help when **subtracting** (taking away).

Example What is 19 **take away** 6 ?



= 13

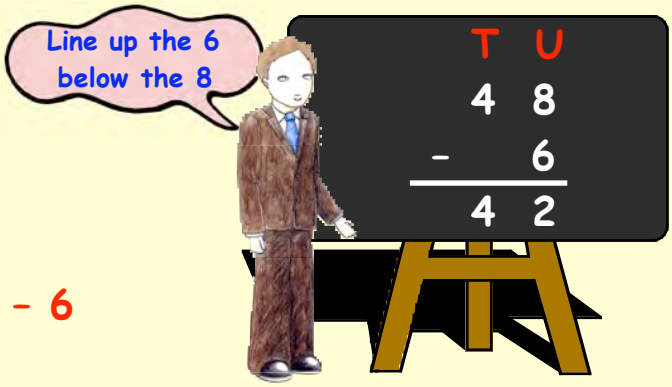
19 – 6 = 13

This can be written as :-

	T	U
	1	9
–		6
	1	3

When subtracting, you must have the numbers in line.

Example Subtract 48 – 6



Exercise 1

Worksheet 4·1

1. **Copy** and **complete** :- (You may use counters to help you).

a	b	c	d
17 – 5	19 – 7	36 – 4	49 – 8

e	64 - 3	**f**	78 - 6	**g**	98 - 5	**h**	26 - 6
i	68 - 7	**j**	77 - 4	**k**	88 - 8	**l**	49 - 2

2. Set down these sums like those above and find :-

a	64 - 3	**b**	55 - 4	**c**	58 - 3	**d**	97 - 5
e	85 - 3	**f**	68 - 6	**g**	99 - 7	**h**	84 - 4

3. Ravi had **17 bags** of crisps for his party.

At the party **5 bags** were eaten.

How many bags of crisps **were left** ?

4.

Mary's party started with **29** balloons.

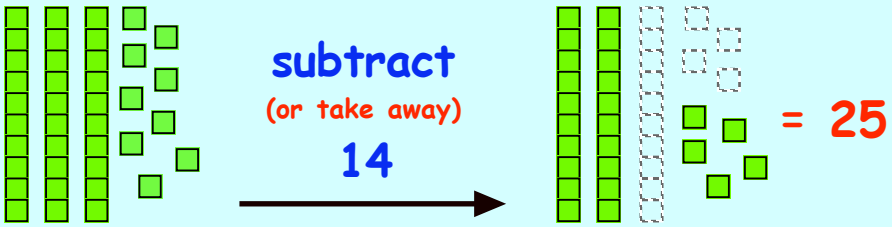
7 balloons burst during the party.

How many balloons **were left** ?

5. **28** sweet bags were made for the party, but only **7** bags were used.

How many sweet bags **were left** ?

Example What is 39 **subtract** 14 ?



39 - 14

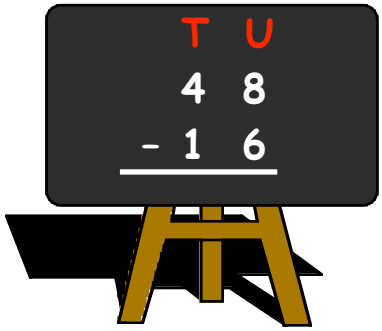
This can be written as :-

T	U
3	9
- 1	4
2	5

Remember you must have the numbers in line.

Worksheet 4·2

6. **Copy** and complete this calculation.
(You may use counters to help you.)



7. **Copy** and **complete** :-

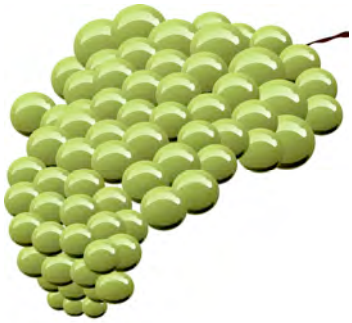
a 52 - 11	b 69 - 15	c 54 - 13	d 73 - 51
e 97 - 33	f 75 - 43	g 98 - 54	h 99 - 43
i 54 - 31	j 87 - 35	k 58 - 30	l 69 - 29

Remember to set down the sums by lining up the numbers correctly

8. Find :-

a	87 - 15	**b**	36 - 14	**c**	49 - 25	**d**	34 - 23
e	63 - 41	**f**	75 - 34	**g**	87 - 40	**h**	87 - 27

9.



A bunch of grapes had **69 grapes**.

Jemma ate **33** of them.

How many grapes **were left** ?

10. John started with **45** golf balls.

He lost **23** of the balls last week.

How many golf balls does John **have left** ?

11.

Nick's new book is **87 pages** long.

Nick reads **43** of the pages.

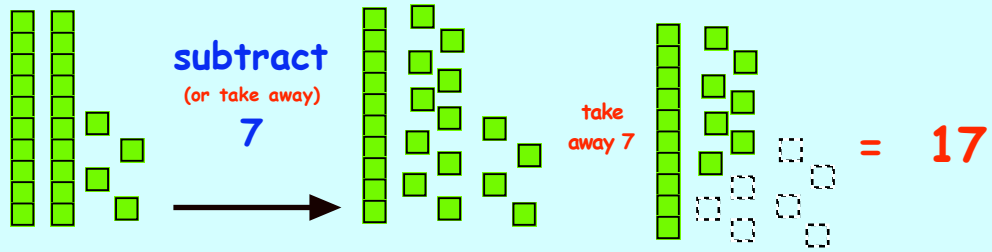
How many pages has he still to read ?

12. Tommy sold **71** raffle tickets from his book of **94** tickets.

How many tickets has he still to sell ?

Subtraction (with carrying)

Example What is 24 **subtract** 7 ?

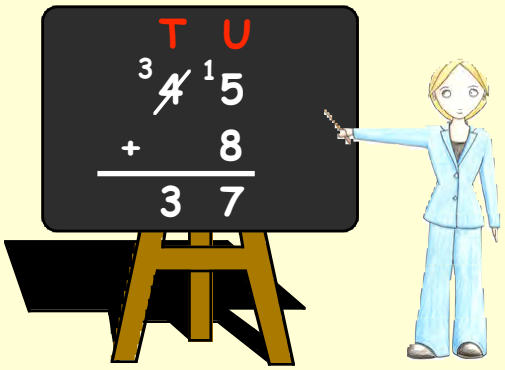


24 - 7

This can be written as :-

T	U
~~2~~ ^{1}	^{1}4
-	7
1	7

Example What is 45 **subtract** 8 ?



We **cannot** take 8 away from 5.

We need to **carry** (or borrow) a ten and add this to the units.

This means the 5 becomes 15, and the 4 tens becomes 3 tens. Now we can do the subtraction.

Exercise 2

Worksheet 4·3

1. **Copy** and **complete** :- (You may use counters to help you).

a	83 - 4	b	47 - 9	c	95 - 8	d	37 - 9
e	46 - 8	f	27 - 8	g	51 - 3	h	17 - 9
i	22 - 7	j	33 - 6	k	83 - 8	l	91 - 7

2. Set down the sums like those in question 1 and find :-

a 28 - 9	**b** 42 - 7	**c** 22 - 6	**d** 93 - 4
e 41 - 6	**f** 44 - 6	**g** 85 - 7	**h** 80 - 8

3. Mrs. Todd hung out **14** socks to dry.

The wind blew away **8** of the socks.

How many socks are left ?

4.

A car park holds **72** cars.

This morning **7** cars are parked.

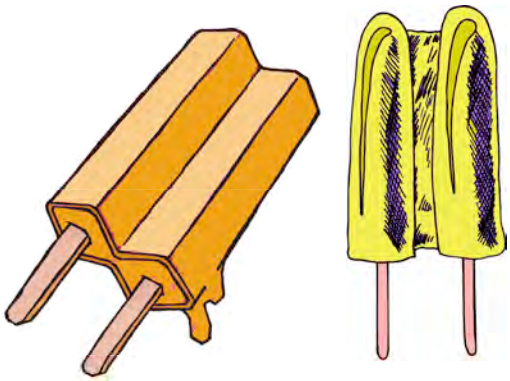
How many cars can still park ?

5. There were **32** mice for sale in the pet shop.

Nine mice were sold.

How many mice are now left ?

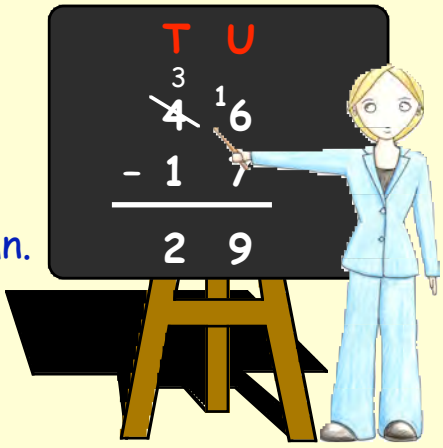
6.



The ice-cream van sells **13** orange lollies and **8** lemon lollies.

How many **more** orange lollies were sold than lemon lollies ?

When we subtract tens and units we set the sum out like this :-



- Look at the **units** column
  (Do you need to carry a ten ? - **yes**)
- Carry the 10. 6 becomes 16
- **Take away** the numbers in the **units** column.

  16 – 7 = 9.
- Now, look at the **tens** column.
  (Has a ten been carried ? - **yes**)
- **Take away** 1 from the **tens** column.
- Finally, **Take away** the numbers in the **tens** column.

  3 – 1 = 2.

Worksheet 4·4

7. **Copy** and **complete** :- (You may use counters to help you).

a	42 - 19	**b**	38 - 29	**c**	52 - 14	**d**	87 - 28
e	66 - 47	**f**	63 - 48	**g**	24 - 19	**h**	34 - 15
i	78 - 49	**j**	32 - 16	**k**	61 - 53	**l**	87 - 78

8. Set down the sums like those above and find :-

a	92 - 23	**b**	78 - 49	**c**	65 - 46	**d**	81 - 27
e	64 - 37	**f**	86 - 57	**g**	47 - 28	**h**	55 - 38

9. Billy found **33** comics in his room.
He decided to throw out **15** of the comics.

How many comics did Billy keep ?

10. At the swimming competition Jemma swam **23** lengths, Lucy swam **17**.

How many **more** lengths did Jemma swim than Lucy ?

11. A car race has **75** laps.

a **Car A** has completed **17** laps.
How many laps does it still need to do ?

b **Car B** has completed **58** laps.
How many laps does it still need to do ?

c **Car C** had engine trouble. It stopped **18 laps from the finish**.
How many laps did Car C **complete** ?

12. In this game of darts the winner is the first to score **92 points**.
Find how many points each player **still needs to score** :-

a Fred scored **37** points

b Harry scored **66** points

c Jenny scored **77** points

d Ian scored **59** points.

Exercise 3 Mixed examples

1. **Copy** and **complete** :- (You may use counters to help you).

a	56 - 4	b	49 - 6	c	36 - 12	d	47 - 13
e	37 - 25	f	47 - 28	g	87 - 49	h	81 - 17
i	88 - 58	j	46 - 38	k	77 - 58	l	91 - 89

2. Set down these sums like those above and find :-

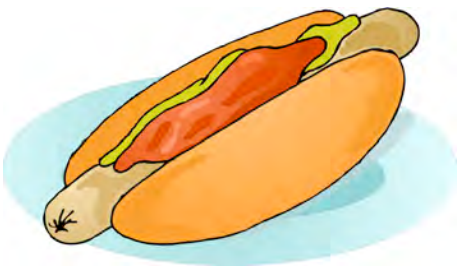
a	37 - 4	b	46 - 6	c	67 - 13	d	54 - 23
e	36 - 12	f	58 - 15	g	34 - 14	h	23 - 16
i	41 - 14	j	66 - 38	k	33 - 29	l	87 - 69

3. A mini hot-dog eating competition took place.

Big Bob ate **93** mini hot-dogs.

Big Barry ate **84** mini hot-dogs.

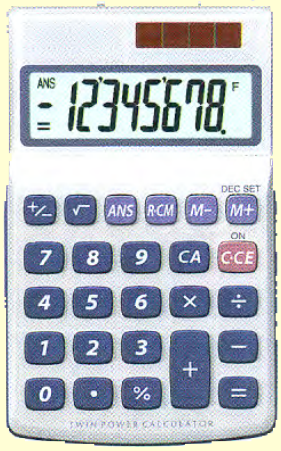
Big Bertha ate **76** mini hot-dogs.



How many **more** mini hot-dogs did **Bob** eat than **Bertha** ?

Using a calculator

Find these buttons on your calculator :-



[−] this means **subtract**

[=] this means **equals**

Examples :-

Tap in 56 [−] 35 [=] . The answer is **21**.

Tap in 126 [−] 88 [=] . The answer is **38**.

Exercise 4

1. a Tap in 86 [−] 28 [=]. Write the answer.

   b Tap in 125 [−] 57 [=]. Write the answer.

2. **Find** :-

a	37 - 29	b	67 - 59	c	43 - 34	d	56 - 26
e	132 - 77	f	138 - 99	g	134 - 87	h	192 - 76
i	265 - 138	j	212 - 176	k	654 - 345	l	444 - 364

3. In a video game, Jo scored **442** points in game 1 and **379** in game 2.

   How many **more** points did she score in game 1 than game 2 ?

Topic in a Nutshell

1. **Find** :-

a 38 − 5	**b** 49 − 7	**c** 48 − 34	**d** 55 − 42
e 36 − 4	**f** 78 − 8	**g** 76 − 35	**h** 56 − 34

2. **Ben** has **76p**. **Jane** has **23p**.

How much **more** money does **Ben** have than **Jane** ?

3. **Find** :-

a 36 − 8	**b** 44 − 7	**c** 47 − 28	**d** 88 − 69
e 55 − 7	**f** 71 − 46	**g** 54 − 18	**h** 77 − 58

4. Amy jogged for **52** minutes. Janie jogged for **27** minutes.

How much longer did Amy jog than Janie ?

You may use a calculator for question 5.

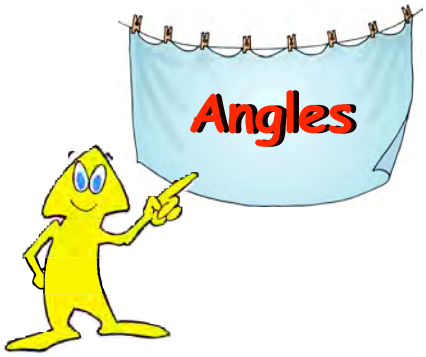
5. There are **254** tickets in a box. **Jane** takes **126**. **Ben** takes **98**.

a How many **more** tickets does **Jane** have than **Ben** ?

b How many tickets are now left in the box ?

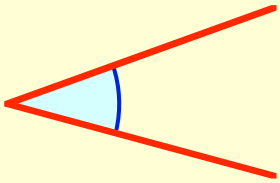
Chapter 5

Calculators should NOT be used.

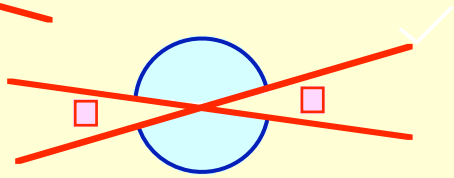


An Angle

When two straight lines meet at a point an **angle** is formed.



Sometimes, more than one angle is formed.



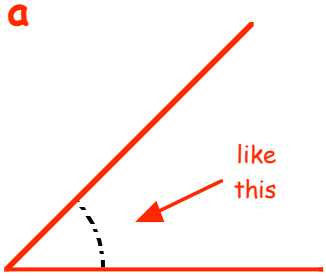
Exercise 1

Worksheet 5·1

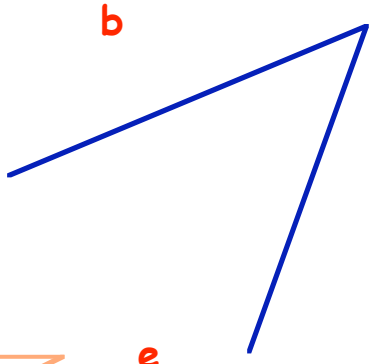
1. **Trace** these angles (or copy them).

   Mark in any angle you see with  and colour each one.

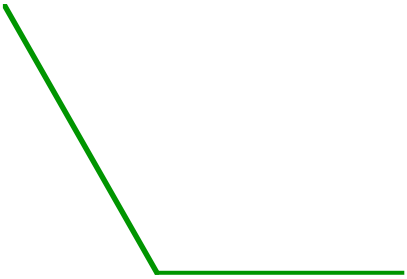
a



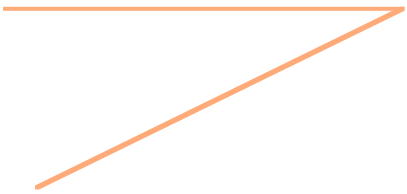
b



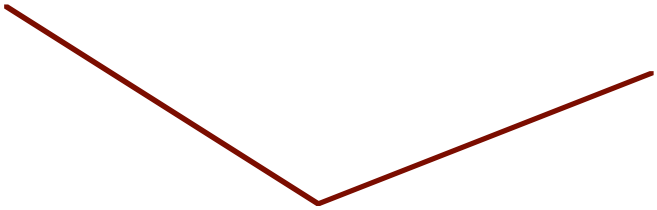
c



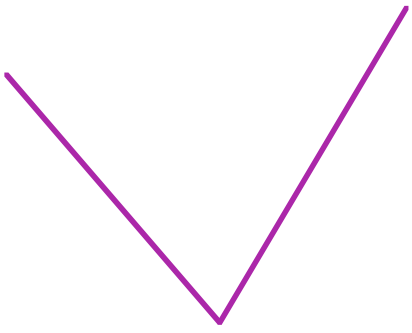
d



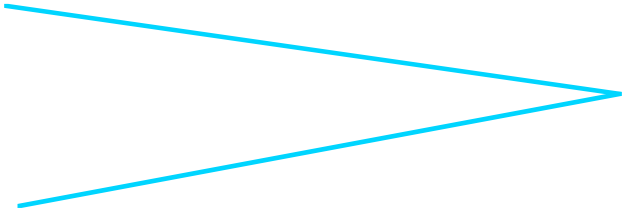
e



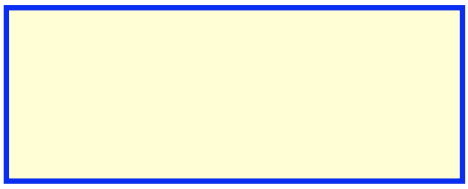
f

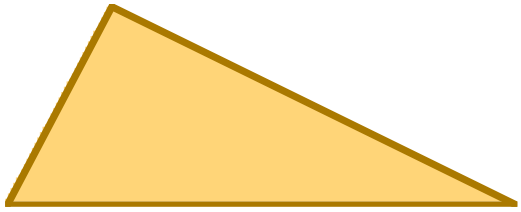


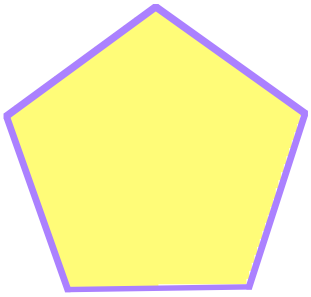
g

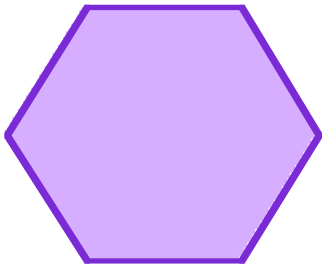


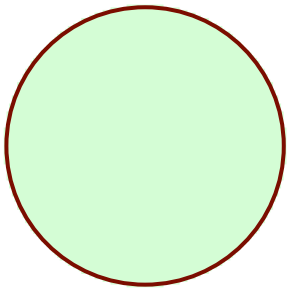
2. How many angles can you see in each picture ?

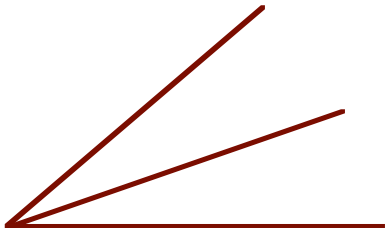
a 

b 

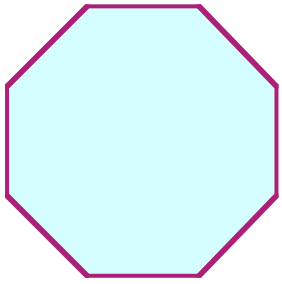
c 

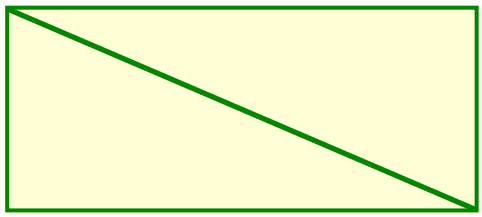
d 

e 

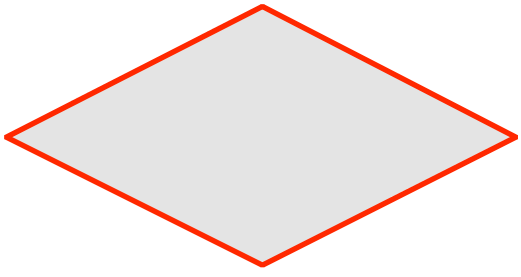
f 

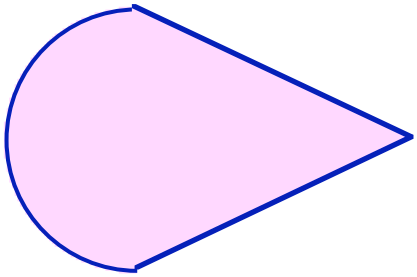
not just 2.

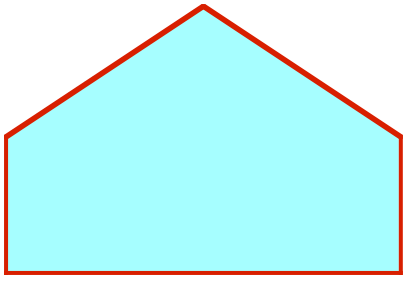
g 

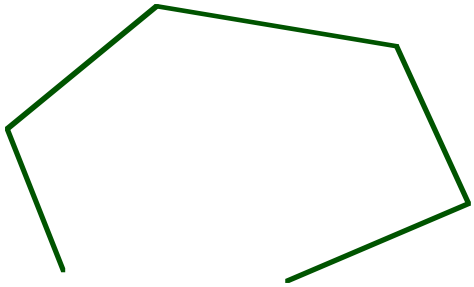
h 

not just 6.

i 

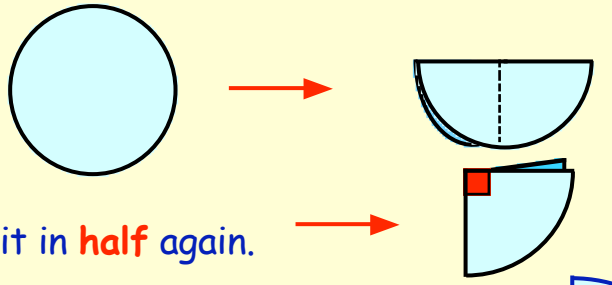
j 

k 

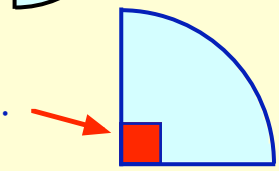
l 

A Right Angle

Fold your circle in **half**.

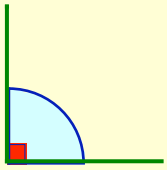


Now fold it in **half** again.

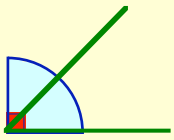


You now have a **template** to check for **right angles**.

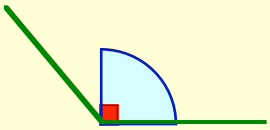
If your template fits **exactly** into an angle,
then the angle will be **a right angle**.



The angle may be **smaller** than a right angle.



The angle may be **larger** than a right angle.

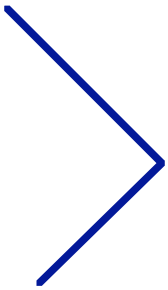


Exercise 2

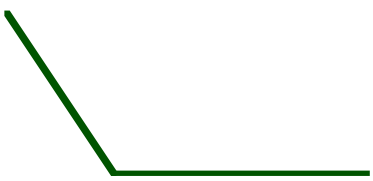
1. Use your template to find out which of these are right angles.

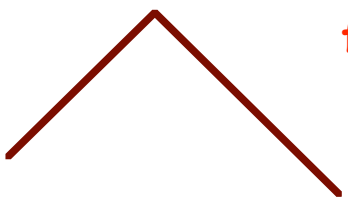
   Answer **YES** or **NO**.

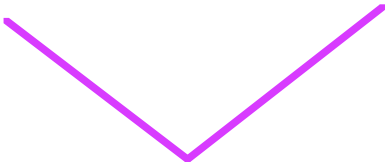
a 

b 

c

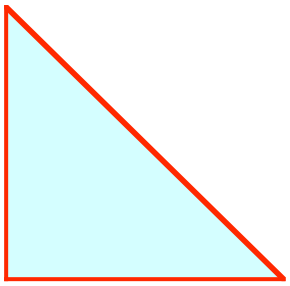
d 

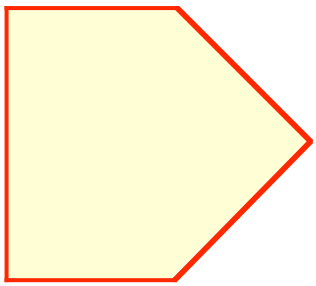
e 

f 

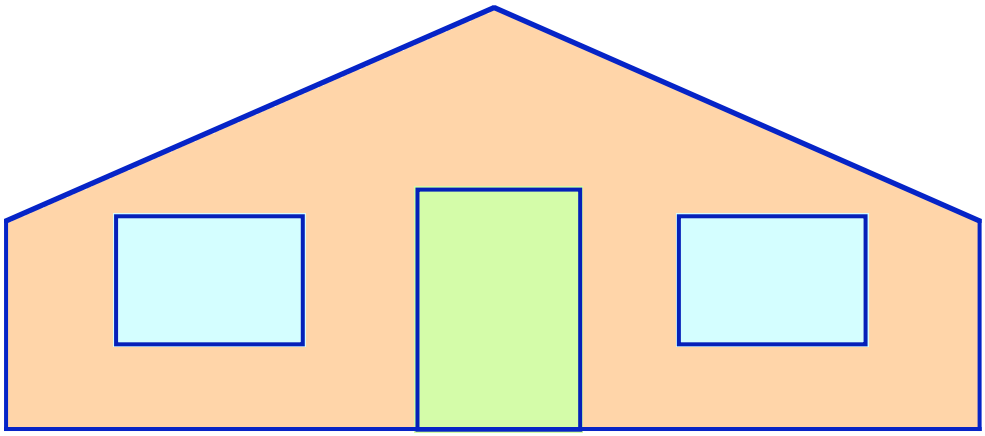
2. Use your template to find out how many **right angles** there are in the 3 figures shown here :-

a 

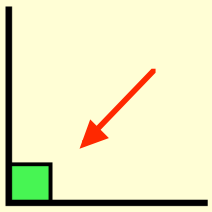
b 

c 

3. How many right angles can you see in this picture of a house ?

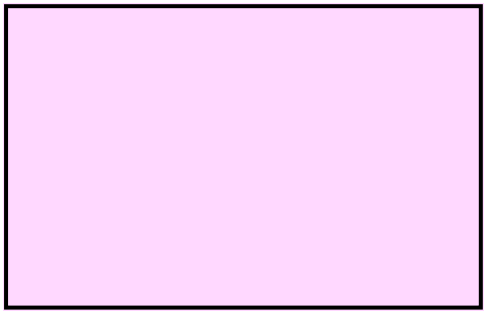


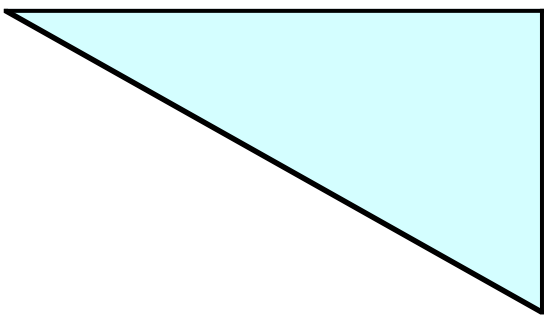
When we draw a right angle, we mark its corner with a **small box**.



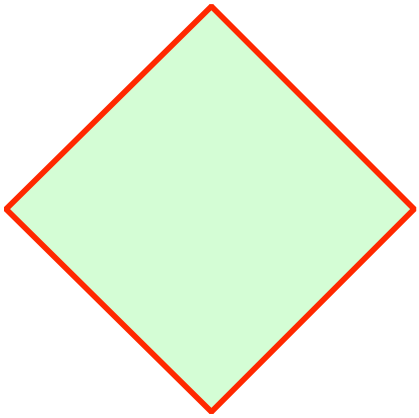
YOU NEED TRACING PAPER

4. **Trace** each shape and mark any right angles with a small box :-

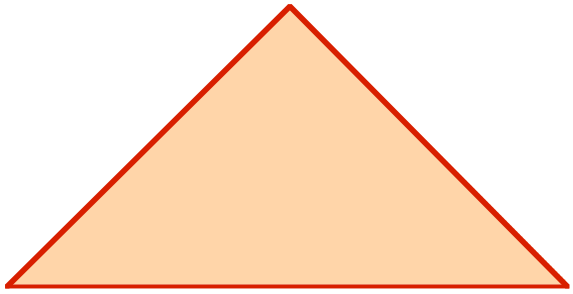
a 

b 

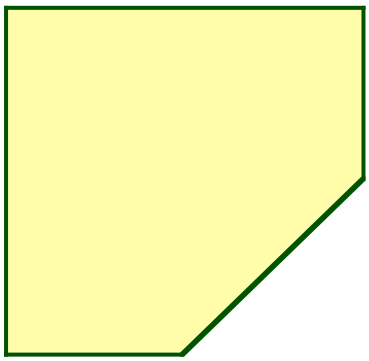
c



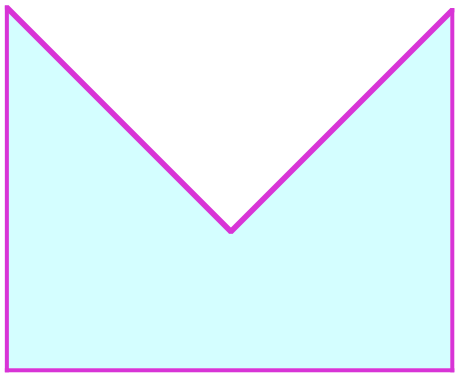
d



e



f



5. Look at the 6 shapes in question **4**.

   a How many of the shapes have **only 1** right angle ?

   b How many of the shapes have **4** right angles ?

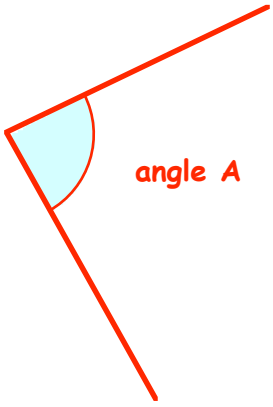
   c How many of the shapes have **3** right angles ?

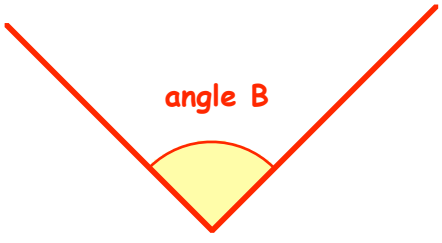
6. You need to use your template **carefully** here.

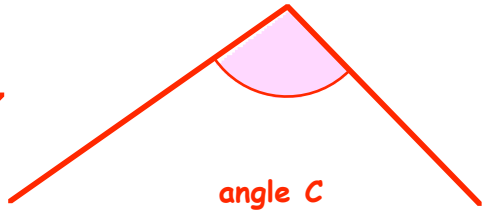
   a One of these angles **is** a right angle. Which one ?

   b One of them is **smaller** than a right angle. Which one ?

   c One of them is **bigger** than a right angle. Which one ?





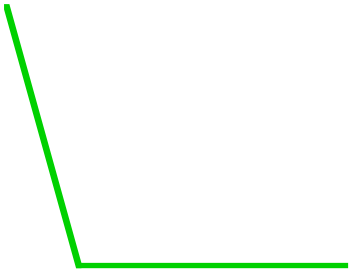


Worksheet 5·2

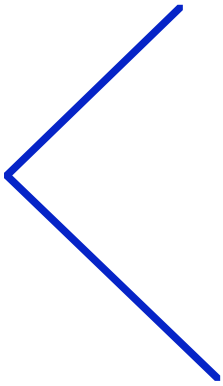
Topic in a Nutshell

1. Which of these angles **are** right angles ? (*Use your template*).

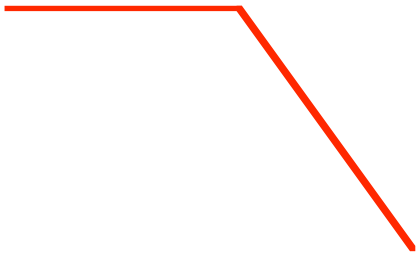
a



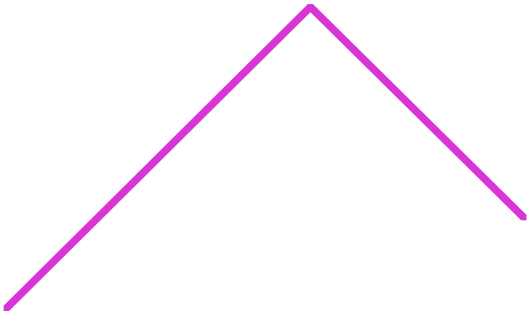
b



c

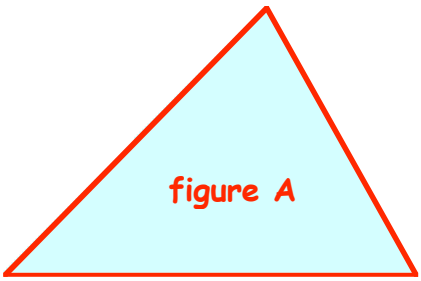


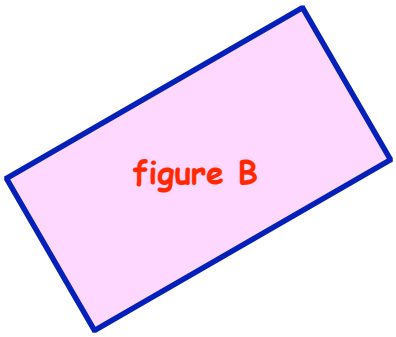
d

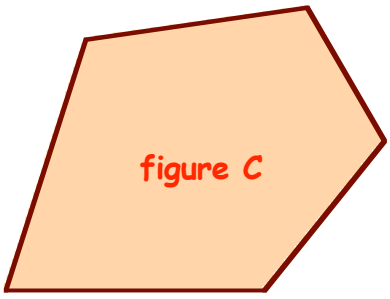


e

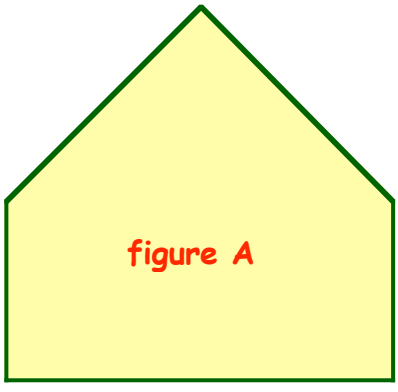
2. How many **angles** can you see in each figure below ?

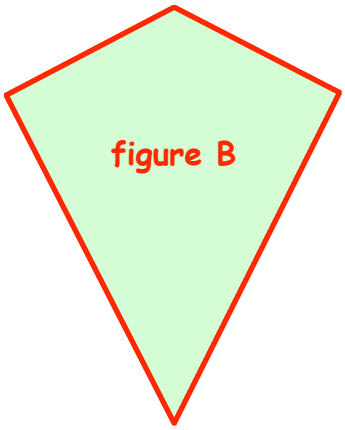


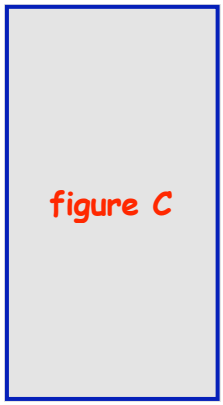




3. How many **right angles** can you see in each figure below ?







Chapter 6

Calculators should NOT be used.

Using money

Here are some coins you might use every day.


20p piece


10p piece


5p piece


2p piece


1p piece

Example 1  is the same as 

Example 2  is the same as 

Exercise 1

Worksheet 6·1

1. a How many  are in  ?

b How many  are in  ?

c How many  are in  ?

d How many  are in  ?

e How many  are in  ?

2. How many **1p** coins are in :-

a 

b 

3. How many **2p** coins are in :-

a 

b 

4. How many **5p** coins are in :-

a 

b 

Ben has 

Jane has 

Altogether they have 38p.

5. How much does each pair of children have **altogether** ?

a Ben  and Ravi 

b Jemma  and Jane 

c Lucy  and Ben 

Here are some more coins you might use.

50p piece

£1 piece

Example 3  is the same as 

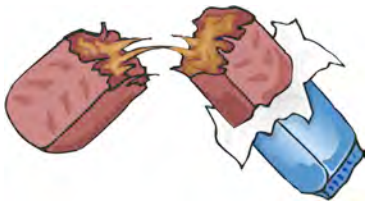
Example 4  is the same as 

6. How many  are in  ?

7. How many  are in  ?

8. How many  are in  ?

9. List the coins you might use to pay for each item **exactly** :-

a 

25p

b 

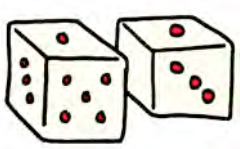
80p

c 

57p

d 

76p

e 

48p

f 

99p

Worksheet 6·2

Money and Decimals

£1 can be written as £1•00.

93p can be written as £0•93.

52p can be written as £0•52.

30p can be written as £0•30.

This is called a **decimal point**

always have **two** numbers to the right of the decimal point if working with **money**

Exercise 2

Worksheet 6·3

1. Write these amounts using a **decimal point** :- (37p = £0·37).

a	95p	**b**	36p	**c**	20p	**d**	13p
e	99p	**f**	10p	**g**	80p	**h**	100p

2. Write each of these as pence without a **decimal point** :-

a	£0·45	**b**	£0·72	**c**	£0·80	**d**	£0·21
e	£0·50	**f**	£0·75	**g**	£1·00	**h**	£0·04

Ninety four pence can be written as **94p** or **£0·94**

3. Write each amount in **two ways** (as above) :-

a	seventy one pence	**b**	twenty two pence
c	sixty pence	**d**	thirty pence
e	one pound and fifty six pence.		

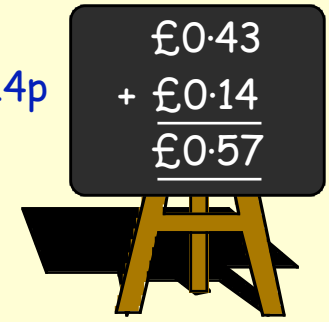
Adding and Subtracting

When you add or subtract money, you **MUST** line up the **decimal points**.

Examples

Addition

43p + 14p
= 57p



Subtraction

78p – 13p
= 65p

Exercise 3

Worksheet 6·4

1. Copy and complete these additions :-

a £0·34 + £0·15	**b** £0·47 + £0·31	**c** £0·44 + £0·34
d £0·55 + £0·16	**e** £0·54 + £0·38	**f** £0·66 + £0·26
g £0·30 + £0·50	**h** £0·25 + £0·55	**i** £0·40 + £0·60
j £0·57 + £0·29	**k** £0·86 + £0·14	**l** £0·29 + £0·69
m £0·53 + £0·26	**n** £0·26 + £0·58	**o** £0·22 + 59p

2. **Copy** and **complete** these **subtractions** :-

a	£0·34 - £0·12	**b**	£0·56 - £0·41	**c**	£0·65 + £0·35
d	£0·47 - £0·25	**e**	£0·87 - £0·75	**f**	£0·76 - £0·66
g	£0·80 - £0·50	**h**	£0·72 - £0·57	**i**	£0·45 - £0·28
j	£0·67 - £0·49	**k**	£0·86 - £0·68	**l**	£0·98 - £0·89
m	£0·76 - £0·24	**n**	£0·45 - £0·18	**o**	£0·62 - 38p

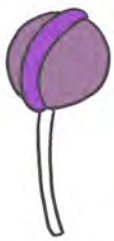
3. **a** Ravi has **£0·76**. His dad gives him **£0·22** .

How much does Ravi have now ?

b Johnnie spent **£0·36** in a chemist and **£0·45** in a newspaper shop.

How much did Johnnie spend in **total** ?

c Lucy bought a sweet for **£0·16** and a lolly for **£0·36**.



How much did Lucy spend **altogether** ?

4. **a** Nick had **£0·88**. He spent **£0·22** on a donut.

How much money did he have left ?

b Jemma had **£0·93** in her purse. She spent **£0·35**.

How much money did she have left ?

c Ben spent **£0·45** of the **£0·60** he had in his pocket.

How much money did he have left ?

d Ravi had **£0·78**. His sister borrowed **£0·35** from him.

How much did Ravi then have left ?

5. Look at the money each person has below :-

Ben £0·56

Nick £0·37

Jane £0·23

Lucy £0·76

a How much do the **girls** have **altogether** ?

b How much do the **boys** have in **total** ?

c How much **more** does **Ben** have than **Jane** ?

d How much **more** does **Lucy** have than **Ben** ?

e How much **more** do the **girls** have than the **boys** ?

f **Nick and Jane** want to buy a bar of chocolate for **70p**.

Do they have **enough** money ? **Explain**.

6. Ben has **£0·70**. Lucy has **£0·47**. Nick has **£1**.

They visit the shop and look at these items :-

Comic £0·45

£0·36

£0·14

Pizza £0·68

Show all your working for each of these questions:-

a How much money would **Lucy** have left if she bought a **comic** ?

b How much money would **Ben** have left if he bought a **comic** ?

c How much money would **Ben** have left if he bought **nuts** ?

d How much money would **Lucy** have left if she bought **2 pencils** ?

e How much money would **Nick** have left if he bought a **pizza** ?

f How much money would **Nick** have left if he bought a **pencil** ?

g Does **Ben** have enough to buy a **comic and** a **pencil** ?

h Does **Ben** have enough to buy **nuts and 2 pencils** ?

i **Lucy** buys **3 pencils**. How much does she have left ?

j **Nick** buys a **comic and nuts**. How much does he have left ?

k How many **pencils** can **Nick** buy **altogether** ?

l How much money do the **3 children** have **altogether** ?

Topic in a Nutshell

1. **a** How many  are in  ?

b How many  are in  ?

c How many  are in    ?

2. List the coins you might use to pay for each item **exactly** :-

a  **33p**

b  **89p**

3. Write each amount in **two ways** :- (twelve pence is **12p** or **£0·12**).

a sixty pence **b** eight pence.

4. **Find** :-

a £0·54 + £0·23 **b** £0·46 + £0·38 **c** £0·78 - £0·24 **d** £0·57 - £0·39

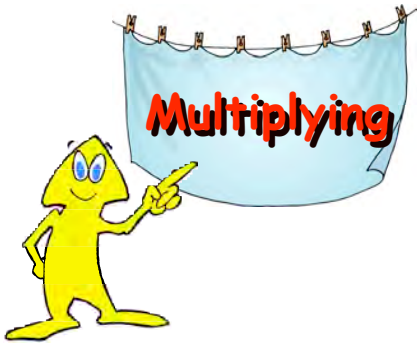
e £0·72 + £0·19 **f** £0·71 – £0·37

5. Nick has **£1**. He spends **38p** on juice and **£0·48** on sweets.

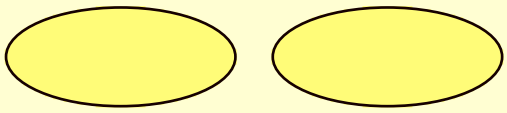
How much does Nick have left ?

Chapter 7

Calculators should NOT be used. except in Exercise 8



2 times table



2 sets of 0 = 0	2 x 0 = 0
2 sets of 1 = 2	2 x 1 = 2
2 sets of 2 = 4	2 x 2 = 4
2 sets of 3 = 6	2 x 3 = 6
2 sets of 4 = 8	2 x 4 = 8
2 sets of 5 = 10	2 x 5 = 10
2 sets of 6 = 12	2 x 6 = 12
2 sets of 7 = 14	2 x 7 = 14
2 sets of 8 = 16	2 x 8 = 16
2 sets of 9 = 18	2 x 9 = 18
2 sets of 10 = 20	2 x 10 = 20

Copy the blue section into your jotters.

Exercise 1

1. **Copy** and **complete** :-

a	2 x 5 =	**b**	2 x 4 =	**c**	2 x 3 =
d	2 x 6 =	**e**	2 x 7 =	**f**	2 x 1 =
g	2 x 10 =	**h**	2 x 9 =	**i**	2 x 8 =

2. Find the **missing** numbers :-

a	2 x .... = 8	**b**	2 x .... = 4	**c**	2 x .... = 0
d	2 x .... = 18	**e**	2 x .... = 2	**f**	2 x .... = 16
g	2 x .... = 14	**h**	2 x .... = 12	**i**	2 x .... = 10

3. **a** A bowl contains **two** bunches of bananas.

There are **4** bananas on each bunch.

How many bananas are there **altogether** ?

b A leaf has **two** ladybirds.

Each ladybird has **8** spots.

How many spots **altogether** ?

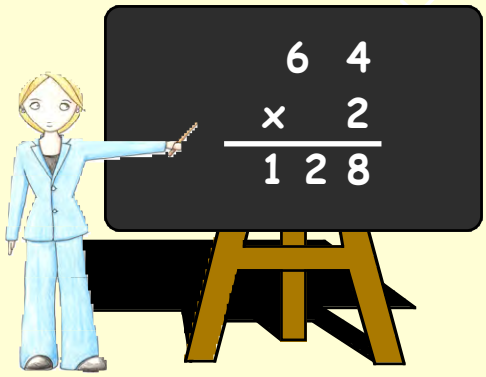
c 

Steve and **Andy** both have **5** sweets each.

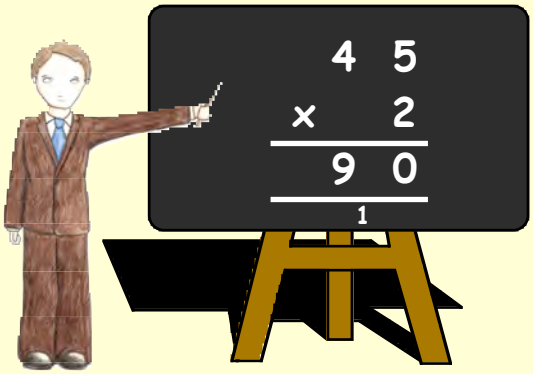
How many sweets do the boys have in **total** ?

Multiplying by 2

Example 1 Find **64 x 2**



Example 2 Find **45 x 2**



Exercise 2

Worksheet 7·1

1. Copy and complete :-

a	32 x 2	b	44 x 2	c	21 x 2
d	35 x 2	e	26 x 2	f	17 x 2
g	73 x 2	h	68 x 2	i	85 x 2

2. Find :-

a	13 x 2	b	42 x 2	c	14 x 2
d	25 x 2	e	47 x 2	f	19 x 2
g	51 x 2	h	62 x 2	i	77 x 2

3. a There are **2** jars on a shelf.

Each jar has **32** pickles.

How many pickles are there **altogether** ?

$$\begin{array}{r} 32 \\ \times\ 2 \\ \hline \end{array}$$

b

Sarah and Ben are **both** **12** today.

How many candles are needed **altogether** ?

c Simon and Danni collect **37** football stickers **each**.

How many stickers are there in total ?

d

One Cheeseburger costs **48p**.

How much would **2** cheeseburgers cost ?

e **One** comic book cost **98p**.

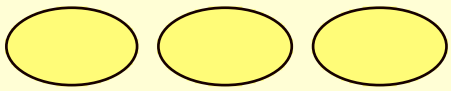
How much would **2** comics cost ?

Doubling a number is the same as **multiplying by 2.**

4. Find :-

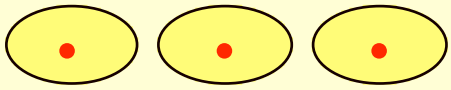
a	double 13	**b**	double 44	**c**	double 28
d	double 35	**e**	double 72	**f**	double 95

3 times table



3 sets of 0 = 0

3 X 0 = 0



3 sets of 1 = 3

3 X 1 = 3

3 sets of 2 = 6

3 X 2 = 6

3 sets of 3 = 9

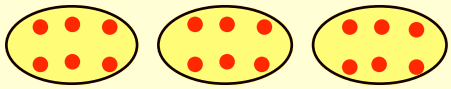
3 X 3 = 9

3 sets of 4 = 12

3 X 4 = 12

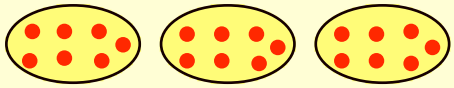
3 sets of 5 = 15

3 X 5 = 15



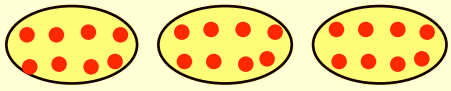
3 sets of 6 = 18

3 X 6 = 18



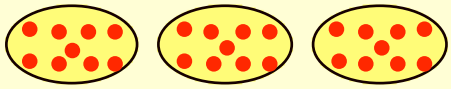
3 sets of 7 = 21

3 X 7 = 21



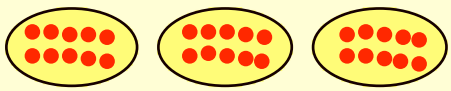
3 sets of 8 = 24

3 X 8 = 24



3 sets of 9 = 27

3 X 9 = 27



3 sets of 10 = 30

3 X 10 = 30

Copy the **blue** section into your **jotters**.

Exercise 3

1. **Copy** and **complete** :-

a	3 x 5 =	**b**	3 x 4 =	**c**	3 x 3 =
d	3 x 6 =	**e**	3 x 7 =	**f**	3 x 1 =
g	3 x 10 =	**h**	3 x 9 =	**i**	3 x 8 =

2. Find the **missing** numbers :-

a	3 x .... = 12	**b**	3 x .... = 6	**c**	3 x .... = 30
d	3 x .... = 27	**e**	3 x .... = 3	**f**	3 x .... = 24
g	3 x .... = 21	**h**	3 x .... = 18	**i**	3 x .... = 15

3. **a** A box has **three** golf balls.

How many golf balls are in **4** boxes ?

b In **3** football games, **6** **goals** are scored in each game.

How many **goals** **altogether** ?

c A CD has **9** songs. How many songs are on **3** CD's ?

d One carton holds **7** glasses of juice.

How many glasses of juice could you get from **3** cartons ?

4. Copy and complete :-

a	23 x 3	b	12 x 3	c	20 x 3
d	15 x 3	e	24 x 3	f	35 x 3
g	44 x 3	h	51 x 3	i	65 x 3

5. Find :-

a	13 x 3	b	31 x 3	c	11 x 3
d	16 x 3	e	24 x 3	f	29 x 3
g	38 x 3	h	42 x 3	i	88 x 3

6. a Each football team has **eleven** players.

How many players are there in **3** teams ?

b A doughnut costs **60p**. How much would **3** doughnuts costs ?

c A train carriage holds **32** people.

How many people would **3** carriages hold ?

4 times table

Look at the **3 times** table on page 68.

The **4 times** table can be made in a similar way.

Use **Worksheet 7·3** to complete the 4 times table.

4 sets of 0 = 0	4 x 0 = 0
4 sets of 1 = 4	4 x 1 = 4
4 sets of 2 = 8	4 x 2 = 8
4 sets of 3 = 12	4 x 3 = 12
4 sets of 4 = 16	4 x 4 = 16
4 sets of .. = ...	4 x 5 = 20
4 sets of .. = ...	4 x 6 = ...
4 sets of .. = ...	4 x 7 = ...
4 sets of .. = ...	4 x .. = ...
4 sets of .. = ...	4 x .. = ...
4 sets of .. = ...	4 .. .. = ...

Exercise 4

1. **Copy** and **complete** :-

a 4 x 5 =	b 4 x 4 =	c 4 x 3 =
d 4 x 6 =	e 4 x 7 =	f 4 x 1 =
g 4 x 10 =	h 4 x 9 =	i 4 x 8 =

2. Find the **missing** numbers :-

a 4 x .... = 16	b 4 x .... = 8	c 4 x .... = 40
d 4 x .... = 36	e 4 x .... = 4	f 4 x .... = 32
g 4 x .... = 28	h 4 x .... = 24	i 4 x .... = 20

Worksheet 7·4

3. Copy and complete :-

a	12 × 4	b	20 × 4	c	14 × 4
d	18 × 4	e	24 × 4	f	36 × 4
g	31 × 4	h	43 × 4	i	55 × 4

4. Find :-

a	11 x 4	b	21 x 4	c	4 x 17
d	27 x 4	e	4 x 13	f	30 x 4
g	4 x 47	h	87 x 4	i	76 x 4

5. a A box holds **22** chocolates.

How many chocolates would be in **4** boxes ?

b A jar of jam costs **64p**. How much would **4** jars costs ?

c A book has **83** pages. How many pages in **4** books ?

d A pickle jar holds **44** pickles. How many pickles in **4** jars ?

5 times table

Look at the **3 times** table on page 68.

The **5 times** table can be made in a similar way.

Use **Worksheet 7·5** to complete the 5 times table.

5 sets of 0 = 0	5 x 0 = 0
5 sets of 1 = 5	5 x 1 = 5
5 sets of 2 = 10	5 x 2 = 10
5 sets of 3 = 15	5 x 3 = 15
5 sets of 4 = 20	5 x 4 = 20
5 sets of .. = ...	5 x 5 = 25
5 sets of .. = ...	5 x 6 = ...
5 sets of .. = ...	5 x 7 = ...
5 sets of .. = ...	5 x .. = ...
5 sets of .. = ...	5 x .. = ...
5 sets of .. = ...	.. . .. = ...

Exercise 5

1. **Copy** and **complete** :-

a 5 x 5 =	b 5 x 4 =	c 5 x 3 =
d 5 x 6 =	e 5 x 7 =	f 5 x 1 =
g 5 x 10 =	h 5 x 9 =	i 5 x 8 =

2. Find the **missing** numbers :-

a 5 x .... = 25	b 5 x .... = 10	c 5 x .... = 50
d 5 x .... = 45	e 5 x .... = 5	f 5 x .... = 40
g 5 x .... = 35	h 5 x .... = 30	i 5 x .... = 15

3. Copy and complete :-

a	11 × 5	**b**	16 × 5	**c**	19 × 5
d	21 × 5	**e**	31 × 5	**f**	42 × 5
g	37 × 5	**h**	56 × 5	**i**	78 × 5

4. Find :-

a	8 x 5	**b**	17 x 5	**c**	23 x 5
d	33 x 5	**e**	30 x 5	**f**	42 x 5
g	53 x 5	**h**	71 x 5	**i**	40 x 5

5. a A bag holds **13** marbles.

How many marbles would be in **5** bags ?

b A pack of biscuits costs **34p**. How much would **5** packs costs ?

c A newspaper has **57** pages. How many pages in **5** newspapers ?

d A clock has **82** cogs.

How many cogs in **5** identical clocks ?

10 times table

Look at the **3 times** table on page 68.

The **10 times** table can be made in a similar way.

Use **Worksheet 7·7** to complete the 10 times table.

10 sets of 0 = 0	10 x 0 = 0
10 sets of 1 = 10	10 x 1 = 10
10 sets of 2 = 20	10 x 2 = 20
10 sets of 3 = 30	10 x 3 = 30
10 sets of 4 = 40	10 x 4 = 40
10 sets of .. = ...	10 x 5 = 50
10 sets of .. = ...	10 x 6 = ...
10 sets of .. = ...	10 x 7 = ...
10 sets of .. = ...	10 x .. = ...
10 sets of .. = ...	10 x .. = ...
10 sets of .. = ...	10 x .. = ...

Exercise 6

1. **Copy** and **complete** :-

a 10 x 5 =	b 10 x 4 =	c 10 x 3 =
d 10 x 6 =	e 10 x 7 =	f 10 x 10 =
g 10 x 0 =	h 10 x 9 =	i 10 x 8 =

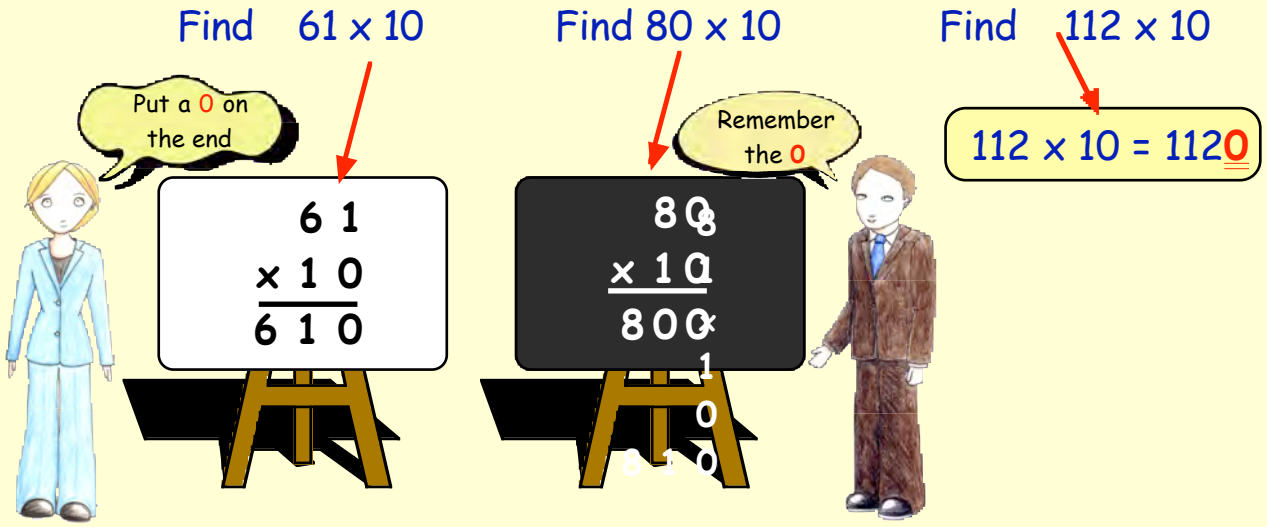
2. Find the **missing** numbers :-

a 10 x .... = 50	b 10 x .... = 20	c 10 x .... = 0
d 10 x .... = 90	e 10 x .... = 10	f 10 x .... = 80
g 10 x .... = 70	h 10 x .... = 60	i 10 x .... = 30

Multiplying by 10

A very easy way to multiply a number by **10** is to

simply put a **0** on **the end** of the number



Exercise 7

Worksheet 7·8

1. Copy and complete :-

a 14 x 10	b 23 x 10	c 52 x 10	d 20 x 10
e 17 x 10	f 121 x 10	g 217 x 10	h 106 x 10
i 230 x 10	j 200 x 10	k 301 x 10	l 190 x 10

2. Do these **mentally** :-

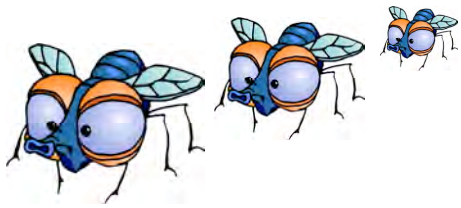
a	41 x 10	**b**	16 x 10	**c**	22 x 10	**d**	76 x 10
e	40 x 10	**f**	20 x 10	**g**	70 x 10	**h**	90 x 10
i	122 x 10	**j**	231 x 10	**k**	401 x 10	**l**	500 x 10

3. Find the **missing** numbers :-

a	10 x .... = 760	**b**	10 x .... = 200	**c**	10 x .... = 1030
d	10 x .... = 900	**e**	10 x .... = 1500	**f**	10 x .... = 3000

4. **a** A fly has **2** wings.

How many wings would **10** flies have ?



b 

An orange has **10** segments.

How many segments in **17** oranges ?

c Rosie the dog eats **10** biscuits a day.

How many biscuits does she eat in a **fortnight** (**14** days) ?

d 

A field has **245** rows of sunflowers.

How many rows in **10** fields ?

e A large multibag of crisps has **10 packets**.

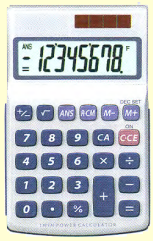
A **box** holds **36** multibags.

How many **packets** are in a **box** ?

Worksheet 7·9

Using a calculator

Find these buttons on your calculator :-



× this means **multiply**

= this means **equals**

Examples :- Type **27** × **5** = The answer is **135.**

Exercise 8

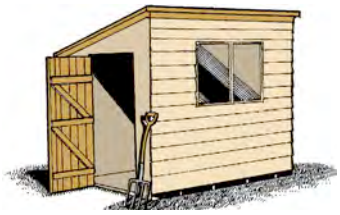
Use a **calculator** for this exercise.

1. Calculate :-

a	5 x 4	**b**	7 x 10	**c**	3 x 9	**d**	4 x 8
e	12 x 8	**f**	11 x 4	**g**	52 x 6	**h**	77 x 9
i	16 x 8	**j**	16 x 7	**k**	15 x 14	**l**	123 x 15

2. a You need **95** planks of wood to build this hut.

How many planks would you need for **5** huts ?



b

There are **52** cards in one pack of cards.

How many cards are there in **7** packs ?

3. Find :-

a 5 x 8 = ... and 8 x 5 = ... **What** do you notice ?

b 32 x 4 = ... and 4 x 32 = ... **What** do you notice ?

Topic in a Nutshell

1. **Copy** and **complete** :-

a	3 x 6 =	**b**	2 x 8 =	**c**	5 x 7 =
d	10 x 6 =	**e**	4 x 6 =	**f**	5 x 9 =

2. Find the **missing** numbers :-

a	2 x ..... = 14	**b**	3 x ..... = 15	**c**	4 x ..... = 32
d	10 x ..... = 90	**e**	4 x ..... = 0	**f**	5 x ..... = 35

3. **a** A box holds **3** golf balls.

How many golf balls are in **7** boxes ?

b

Each girl in a group has **4** pets.

How many pets if there are **9** girls ?

c Each row in a box of chocolates has **four** chocolates.

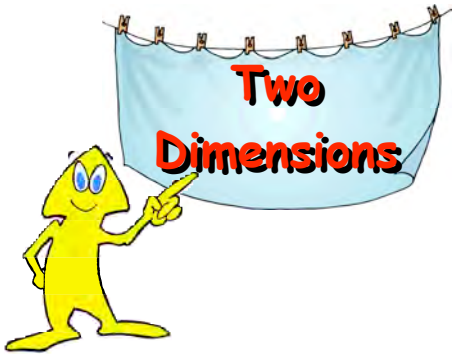
How many chocolates if there are **six** rows ?

4. **Find** :-

a	54 x 2	**b**	75 x 3	**c**	47 x 4
d	31 x 3	**e**	45 x 5	**f**	49 x 4

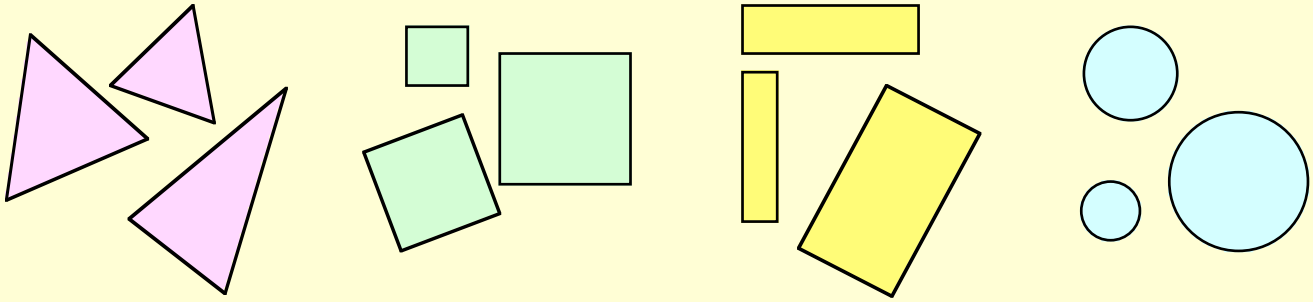
Chapter 8

Calculators should NOT be used.



Names of Shapes

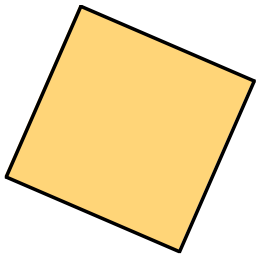
You should know these shapes :-

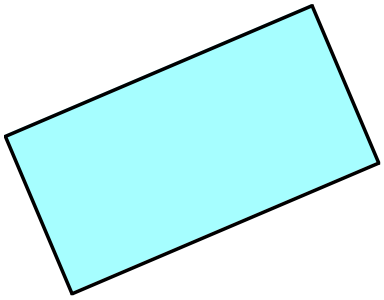


triangles squares rectangles circles

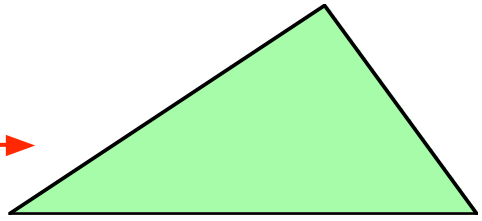
Exercise 1

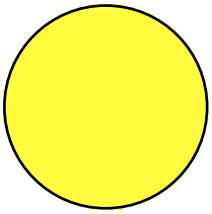
1. What is this shape called ?



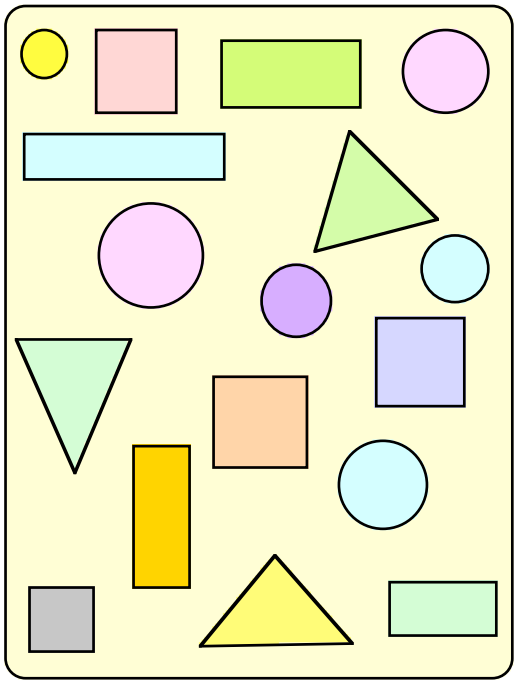
2.  What is this shape called ?

3. What is this shape called ?



4.  What is this shape called ?

5. Look at this picture :-



a How many **circles** are there ?

b How many **squares** ?

c How many **triangles** ?

d How many **rectangles** ?

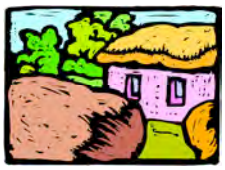
e How many **pink** **circles** are there ?

f How many **green** **triangles** are there ?

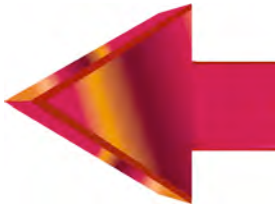
6. Look at these pictures. What shapes can you **see** in them ?

a 

b 

c 

d 

e 

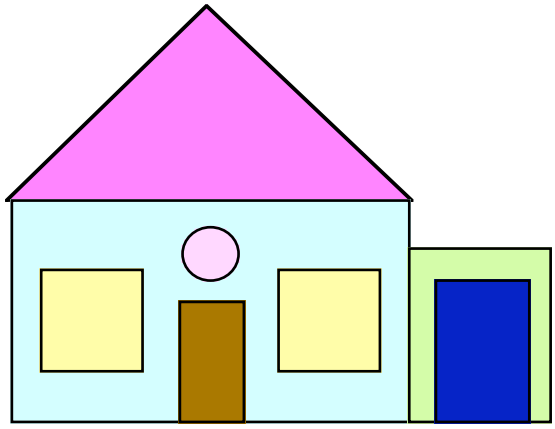
f 

g 

h 

7. This house is made up of shapes.

How many **squares**, **rectangles**, **circles** and **triangles** can you see ?

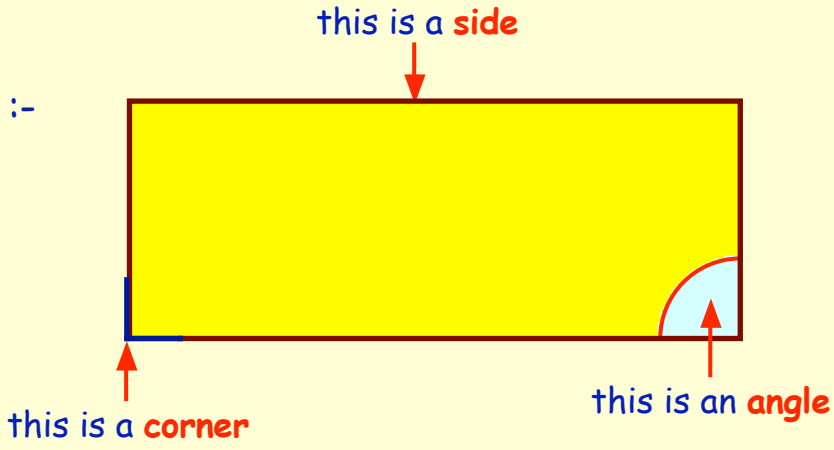


Sides, Corners and Angles

Look at this **rectangle** :-

Can you see that it has :-

- **4 corners**
- **4 sides**
- **4 angles** ?



Exercise 2

You will need a **ruler**.

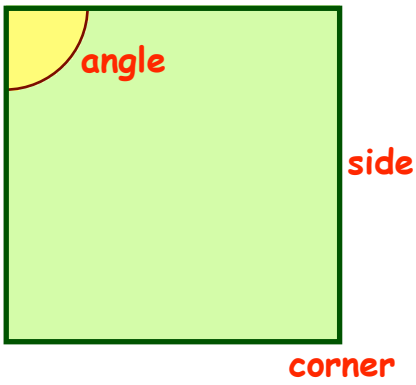
Worksheet 8·1

1. **Copy** this **square** and colour it in **green**.

   a Write the word **side** next to each side.

   b Write the word **corner** next to each corner.

   c Mark each **angle** like this :-

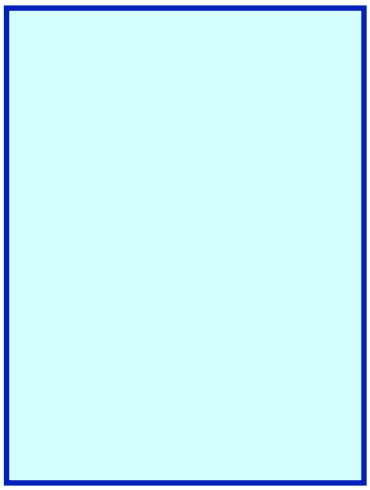


2. **Copy** this **rectangle** and colour it in **blue**.

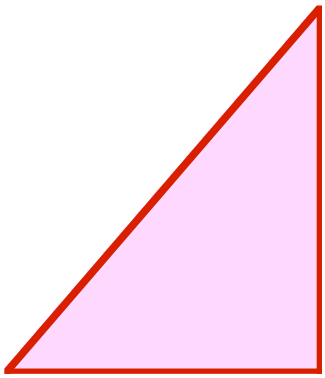
   a Write the word **side** next to each side.

   b Write the word **corner** next to each corner.

   c Mark each **angle** like this :-



3. **Copy** this **triangle** and colour it in **pink**.

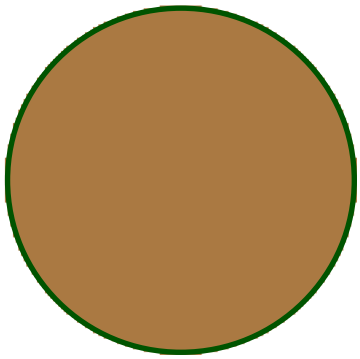


a Write the word **side** next to each side.

b Write the word **corner** next to each corner.

c Mark each **angle**.

4. Look at this **brown circle** :-

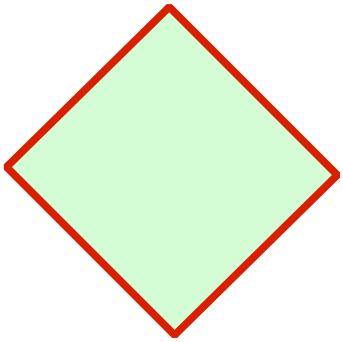


a How many **sides** does it have ?

b How many **corners** does it have ?

c How many **angles** does it have ?

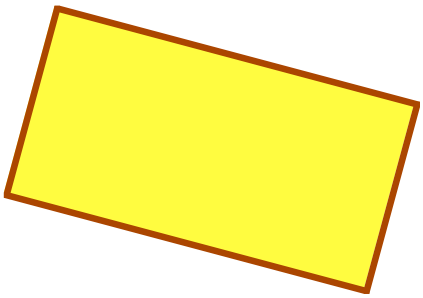
5. a How many **sides** does a **square** have ?



b How many **corners** does it have ?

c How many **angles** does it have ?

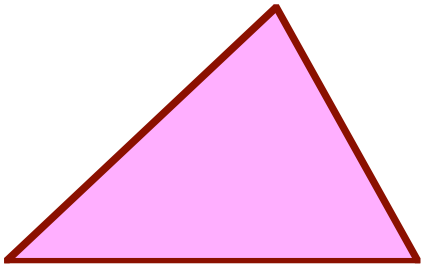
6. a How many **sides** does a **rectangle** have ?



b How many **corners** does it have ?

c How many **angles** does it have ?

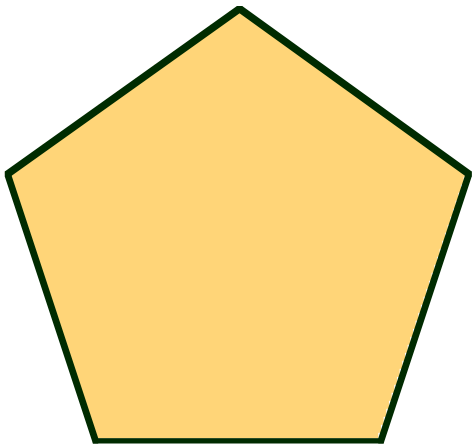
7. a How many **sides** does a **triangle** have ?



b How many **corners** does it have ?

c How many **angles** does it have ?

8. **Copy** or **trace** this shape and colour it.



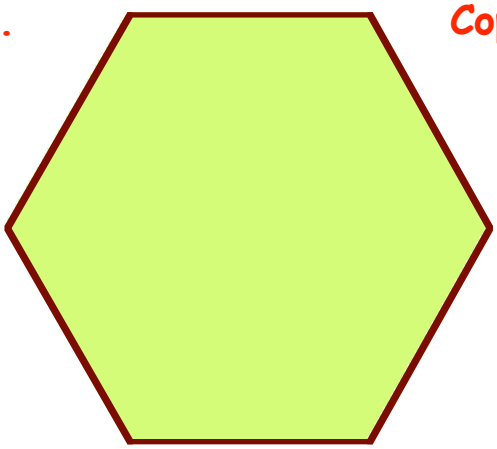
a How many **sides** does the shape have ?

b How many **corners** does it have ?

c How many **angles** does it have ?

d Find out what the shape is called.

9.



Copy or **trace** this shape and colour it in.

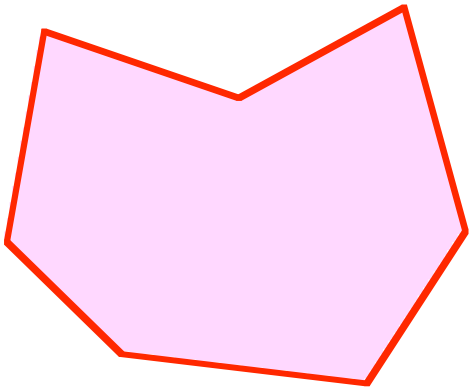
a How many **sides** does the shape have ?

b How many **corners** does it have ?

c How many **angles** does it have ?

d Find out what the shape is called.

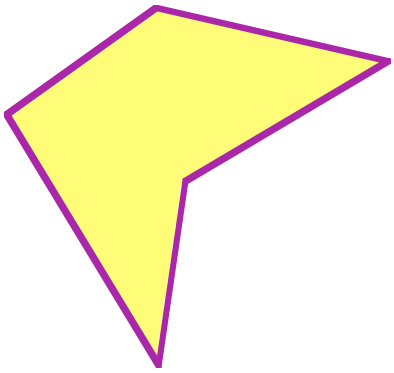
10. a How many **sides** does this shape have ?



b How many **corners** does it have ?

c How many **angles** does it have ?

11.

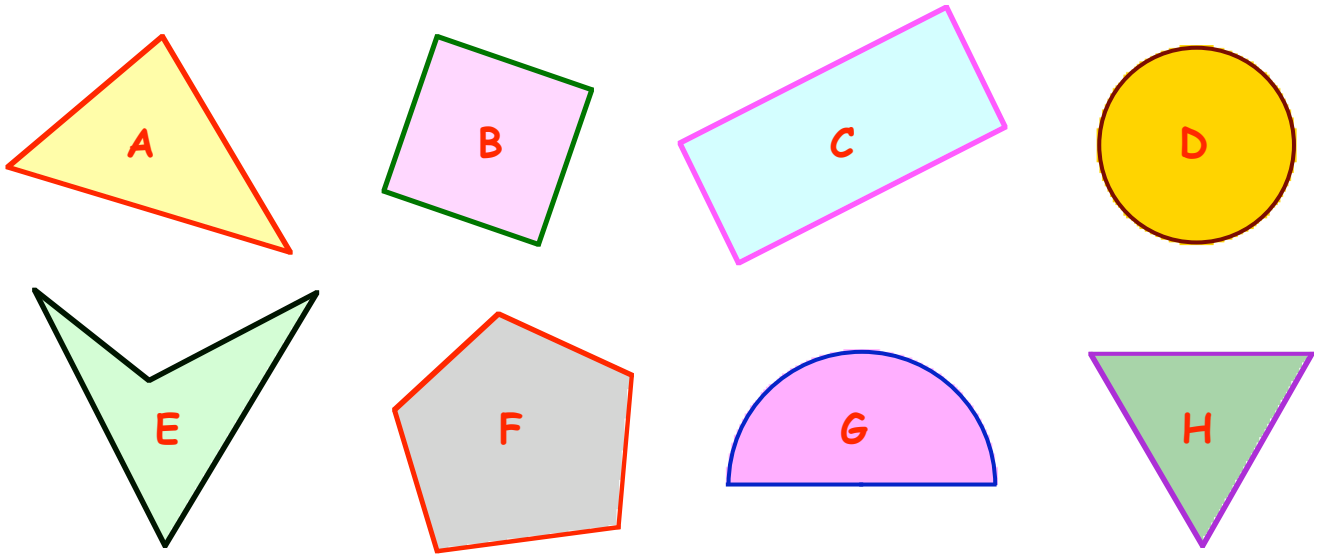


a How many **sides** does this shape have ?

b How many **corners** does it have ?

c How many **angles** does it have ?

12. Look at these shapes :-



a Which shapes have **4 sides** ?

b Which shapes have **3 angles** ?

c Which shape has **5 corners** ?

d Which shape has **1 curved side** only ?

e Which shape has **1 curved** and **1 straight side** ?

13. Use a ruler to help draw each of these :- (**Colour** them.)

a A shape with **3 sides**.

b A shape with **4 angles**.

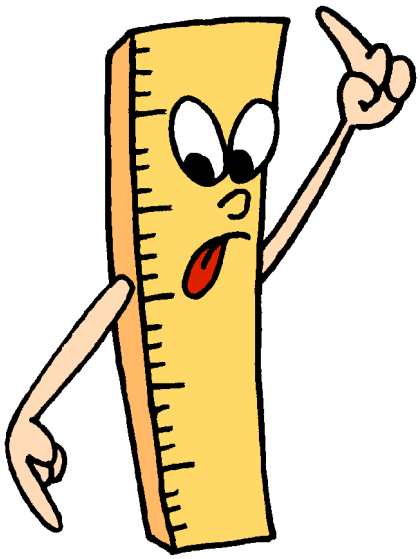
c A shape with **5 sides**.

d A shape with **6 sides**.

e A shape with **4 corners**.

f A shape with **8 sides**.

g A shape with just **1 curved side**. (*hard*)

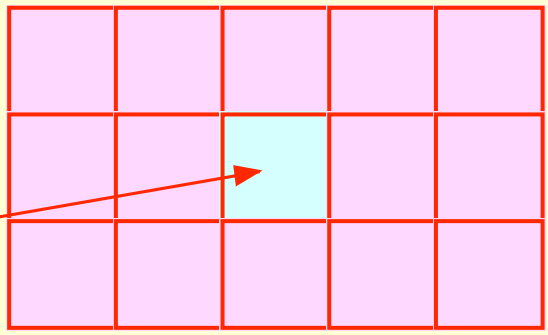


Tiling

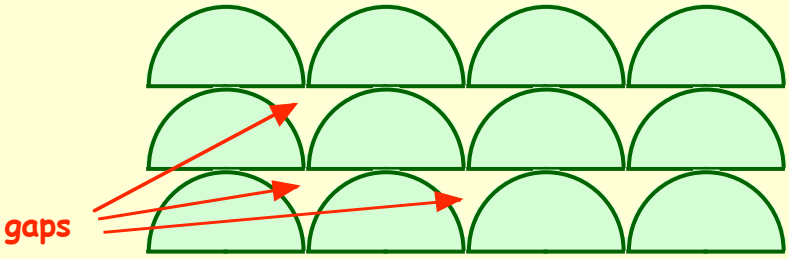
You can use some **shapes** to cover a page with no **gaps**.

This is called **tiling**.

The **blue square** can **tile**.



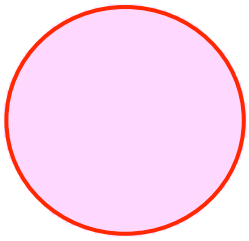
This **green half-circle** does **NOT tile**.



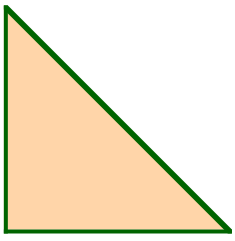
Exercise 3

1. Will this shape tile ?

2. Will this shape tile ?

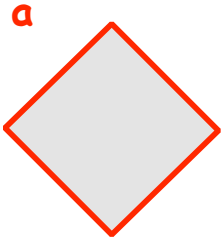


3. Will this shape tile ?

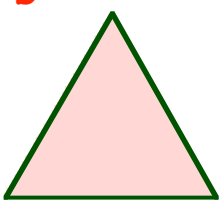


4. Do these shapes tile ? (Write **yes** or **no**.)

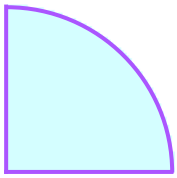
a



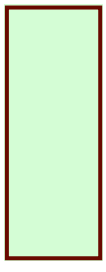
b



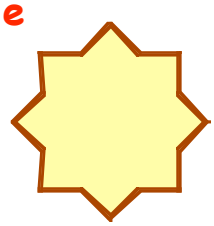
c



d



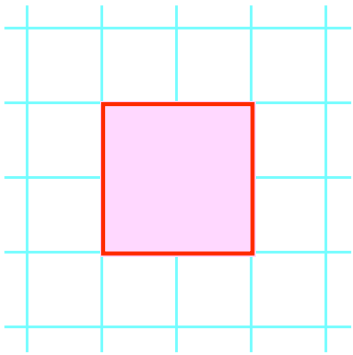
e



You need **1 centimetre squared paper .**

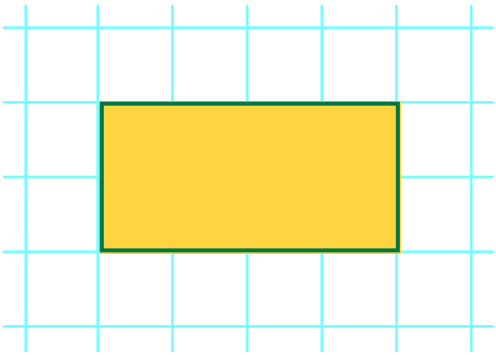
Worksheet 8·2

5. Copy this **square** onto squared paper. Colour it.



Draw **8** more squares around it to show how the square **tiles**.

6. Copy this **rectangle** onto squared paper. Colour it.

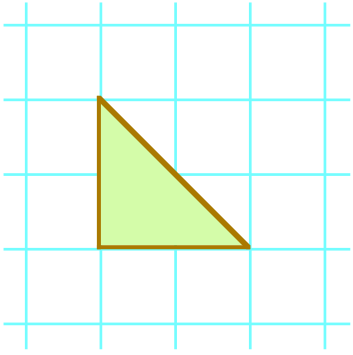


Draw **8** more rectangles round it to show how the rectangle **tiles**.

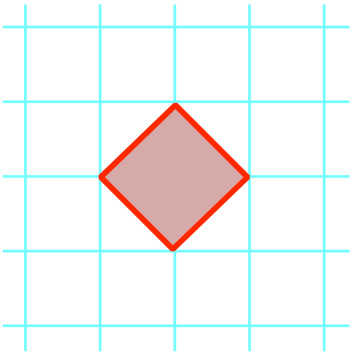
7. Copy this **triangle** onto squared paper.

Colour it.

Draw **some more** triangles around it to show how the triangle **tiles**.

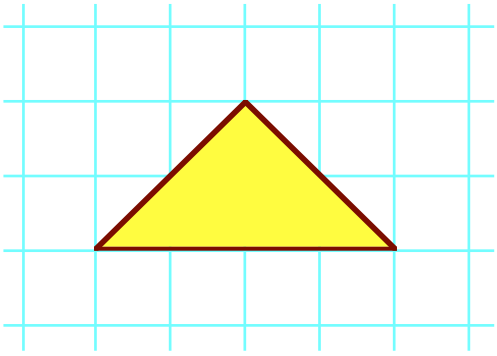


8. Copy this **square** onto squared paper. Colour it.



Draw **some more** squares round it to show how this square tiles.

9. Copy this **triangle** onto squared paper. Colour it.

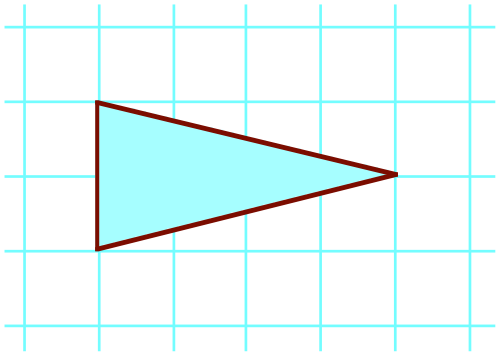


Draw **some more** triangles round it to show how the triangle tiles.

10. Copy this **triangle** onto squared paper.

Colour it.

Draw **some more** triangles round it to show how the triangle tiles.



Worksheet 8·3

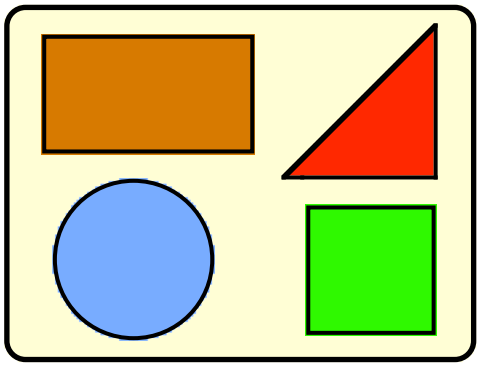
Topic in a Nutshell

1. a What is the name of the **red** shape ?

   b What is the name of the **blue** one ?

   c What is the name of the **green** one ?

   d What is the name of the **brown** one ?



2. 

   a How many **sides** has this shape ?

   b How many **corners** ?

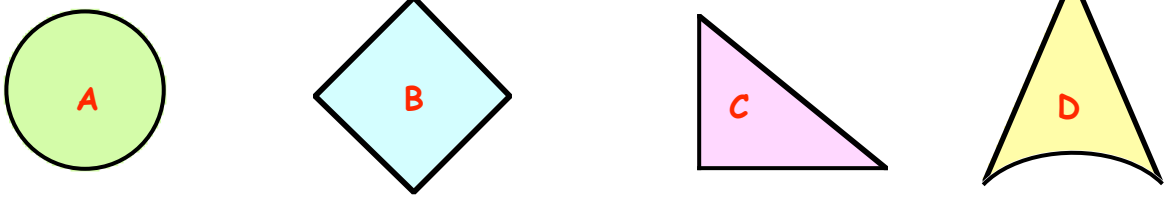
   c How many **angles** ?

3. a Use a ruler to draw a shape with **five** sides.

   b How many **corners** does your shape have ?

   c How many **angles** does it have ?

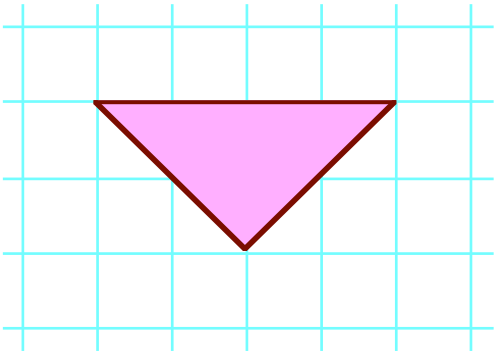
4. Which of these shapes will **tile** ? (with **no** gaps).



5. Copy this **triangle** onto squared paper.

   Colour it.

   Draw **some more** triangles around it to show how this triangle **tiles**.

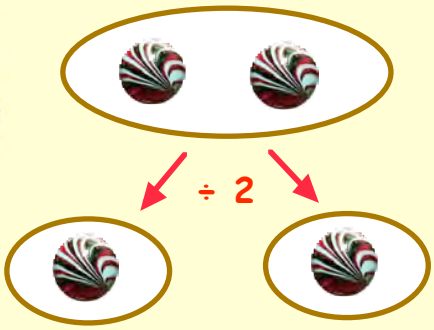


Chapter 9

Divide by 2

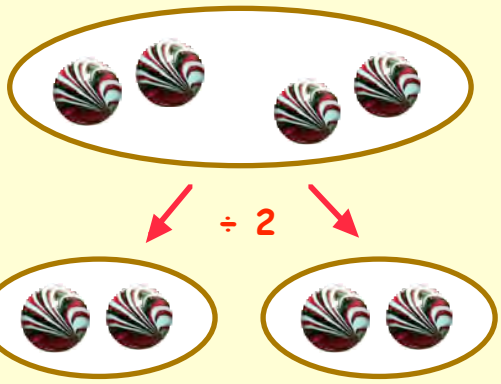
Dividing by **2** is like **sharing** equally between **two**.

Lucy had **2** marbles.
She shared them with Jane
Jane and Lucy each got **1** marble.



We say that **2 divided by 2 = 1**.

or **2 ÷ 2 = 1**



Nick had **4** marbles.
He shared them with Ben.
Nick and Ben each got **2** marbles.

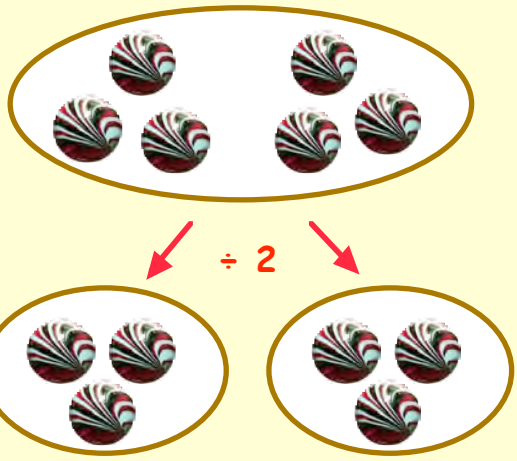
We say that **4 divided by 2 = 2**

or **4 ÷ 2 = 2**

Jemma had **6** marbles.
She shared them equally with Ravi.
Jemma and Ravi each got **3** marbles.

We say that **6 divided by 2 = 3**

or **6 ÷ 2 = 3**



Exercise 1

1. **Copy** each of these and **complete** :-

a $4 \div 2 =$	**b** $6 \div 2 =$	**c** $8 \div 2 =$ ....
d $10 \div 2 =$	**e** $12 \div 2 =$	**f** $14 \div 2 =$ ....
g $16 \div 2 =$	**h** $18 \div 2 =$	**i** $20 \div 2 =$ ....

2. Find the missing numbers :-

a $\square \div 2 = 3$	**b** $\square \div 2 = 5$	**c** $\square \div 2 = 8$
d $\square \div 2 = 10$	**e** $\square \div 2 = 6$	**f** $\square \div 2 = 7$

3. Do these questions **mentally**.

a **6** sweets are shared equally between **2** girls.

How many sweets did each girl get ?

b 

10 carrots are shared equally between **2** rabbits.

How many carrots did each rabbit get ?

c **14** biscuits are shared equally between **2** dogs.

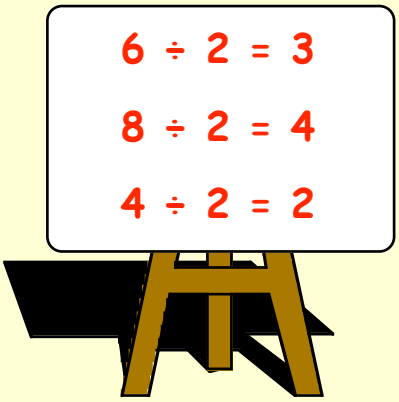
How many biscuits did each dog get ?

d 

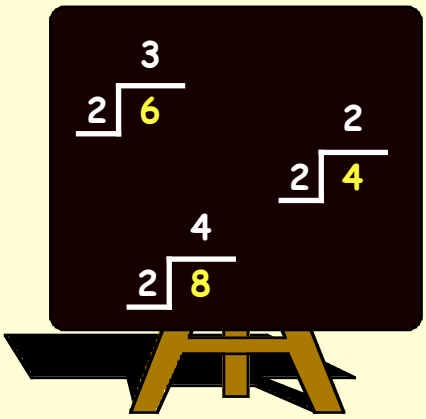
4 slices of toast are shared equally between Mr and Mrs Todd.

How many slices did each person get ?

Division sums can be written in 2 ways.



OR



When **dividing** into **larger numbers** you have to do the sum in 2 stages.

64 ÷ 2 = ... can be written as :-

$$\begin{array}{r} 3\,2 \\ 2\overline{)\,6\,4} \end{array}$$

How many 2's are in the 6 ? ans 3

How many 2's are in the 4 ? ans 2

82 ÷ 2 = ... can be written as :-

$$\begin{array}{r} 4\,1 \\ 2\overline{)\,8\,2} \end{array}$$

How many 2's are in the 8 ? ans 4

How many 2's are in the 2 ? ans 1

Exercise 2

Worksheet 9·1a

1. **Copy** each of these and **complete** :-

a $2\overline{)24}$	b $2\overline{)28}$	c $2\overline{)46}$	d $2\overline{)48}$
e $2\overline{)66}$	f $2\overline{)64}$	g $2\overline{)82}$	h $2\overline{)88}$
i $2\overline{)62}$	j $2\overline{)86}$	k $2\overline{)46}$	l $2\overline{)26}$

Show ALL Working

2. a 48 football stickers were divided equally between Ravi and Nick.
   How many stickers did each boy get ?

   b £24 was shared equally between Jane and Jemma.
   How much money did each get ?

Dividing by 2 - Remainders

Sometimes when you divide or share objects there are some left over - these are called **remainders**.

Example :- 7 walnuts to be split equally into **two** bags

3 nuts in 1 bag
3 nuts in the other bag
but there is 1 nut left over

7 ÷ 2 = 3 remainder 1

$$2\overline{)7} \quad 3 \text{ r } 1$$

When **dividing** into **larger numbers** you again have to use 2 stages

27 ÷ 2 = ...
can be written as :- $2\overline{)27}$ 1 3 r 1

How many 2's are in 2 ? ans 1
How many 2's are in 7 ? ans 3 r 1

45 ÷ 2 = ...
can be written as :- $2\overline{)45}$ 2 2 r 1

How many 2's are in 4 ? ans 2
How many 2's are in 5 ? ans 2 r 1

Exercise 3

Worksheet 9·1b

1. **Copy** each of these and **complete**. **You can use counters or cubes.**

a 9 ÷ 2 = ...	b 5 ÷ 2 = ...	c 3 ÷ 2 = ...	d 7 ÷ 2 = ...
e 11 ÷ 2 = ...	f 17 ÷ 2 = ...	g 19 ÷ 2 = ...	h 13 ÷ 2 = ...

2. **Copy** and **complete** these :-

a 23 ÷ 2 = ...	b 47 ÷ 2 = ...	c 65 ÷ 2 = ...	d 87 ÷ 2 = ...
e $2\overline{)25}$	f $2\overline{)41}$	g $2\overline{)63}$	h $2\overline{)89}$

Show ALL Working

3. a 

21 cherries were shared equally between Ravi and Nick.

How many cherries did each boy get and how many were left over ?

b 27 shrimps were shared equally between two chefs.

How many shrimps did each chef get and how many were left over ?

c 

Al & Alison shared 69 toffees equally.

How many toffees did each get and how many were left over ?

d Ben and Sam bought 83 football stickers and shared them equally.

How many stickers did each get and how many were left over ?

e 

Two seals were fed 29 fish.

If both seals were fed the same number of fish, how many did each get and how many were left over ?

f 43 lettuce seeds were split equally into two rows in a garden.

How many seeds were in each row and how many were left ?

g 81 cookies were split equally and put on two plates .

How many cookies were on each plate and how many were left ?

Dividing by 2 - More about Remainders

Remainders sometime come **in the middle** of the division.

Example 1 :- Find 32 ÷ 2.

$$2\overline{)3^{1}2} \quad 16$$

The remainder is carried

Often, the division has **remainders more than once**.

Example 2 :- Find 35 ÷ 2.

$$2\overline{)3^{1}5} \quad 17 \text{ r } 1$$

The remainder is carried and there is still another remainder

Example 3 :- Find 57 ÷ 2.

$$2\overline{)5^{1}7} \quad 28 \text{ r } 1$$

Exercise 4

Worksheet 9·2a

1. **Copy** each of these and **complete**. **You can use counters or cubes.**

a 38 ÷ 2 = ... **b** 50 ÷ 2 = ... **c** 72 ÷ 2 = ... **d** 94 ÷ 2 = ...

e $2\overline{)34}$ **f** $2\overline{)70}$ **g** $2\overline{)52}$ **h** $2\overline{)96}$

Show ALL Working

2. **a** **30** litres of oil were split equally between two cars.

How many litres were put in each car ?

b

The total number of seats on two buses is **52**.

If each bus has the same number of seats how many seats does each bus have ?

2. c The total number of biscuits in **two** boxes is **78** .

The same number was taken from each box.
How many biscuits were taken from each box ?

d 

Two identical newspapers have a total number of **90** pages.

How many pages are in each newspaper ?

3. Copy each of these and **complete**. **You can use counters or cubes.**

a	57 ÷ 2 = ...	**b**	39 ÷ 2 = ...	**c**	71 ÷ 2 = ...	**d**	93 ÷ 2 = ...
e	$2\overline{)31}$	**f**	$2\overline{)55}$	**g**	$2\overline{)73}$	**h**	$2\overline{)99}$

Show ALL Working

4. a 

59 candy canes were divided equally between 2 boys.

How many canes were given to each boy and how many were left over ?

b 37 scarecrows were divided equally between two fields.

How many scarecrows were in each field and how many were left over ?

c 

Two singers chose from a total of 19 songs at a Karaoke.

If they each sung the same number of songs how many did they each sing and how many songs were left over ?

5. Copy each of these and **complete** :-

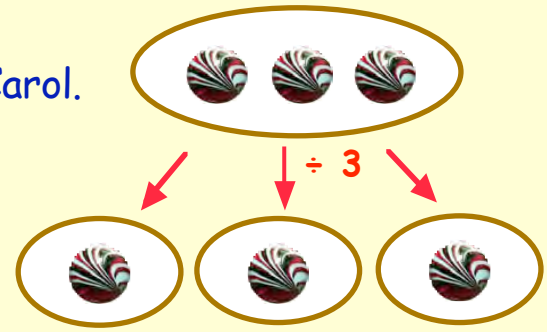
a	$2\overline{)18}$	**b**	$2\overline{)48}$	**c**	$2\overline{)65}$	**d**	$2\overline{)77}$
e	$2\overline{)21}$	**f**	$2\overline{)86}$	**g**	$2\overline{)29}$	**h**	$2\overline{)95}$

Worksheet 9·2b

Divide by 3

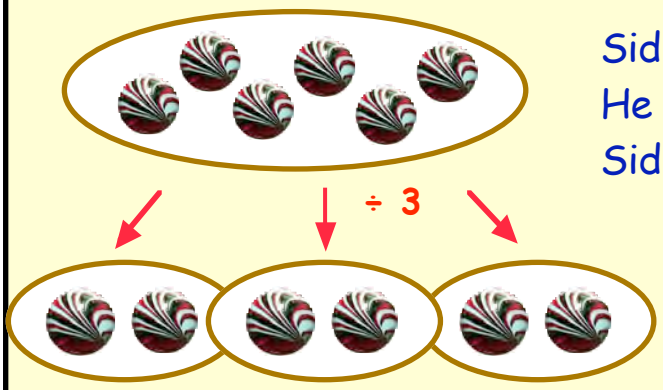
Dividing by **3** is like **sharing** equally among **three**.

Jill had **3** marbles.
She shared them equally with Ann and Carol.
Jill, Ann and Carol each got **1** marble.



We say that **3 divided by 3 = 1**.

or **3 ÷ 3 = 1**



Sid had **6** marbles.
He shared them with Bob and Joe.
Sid, Bob and Joe each got **2** marbles.

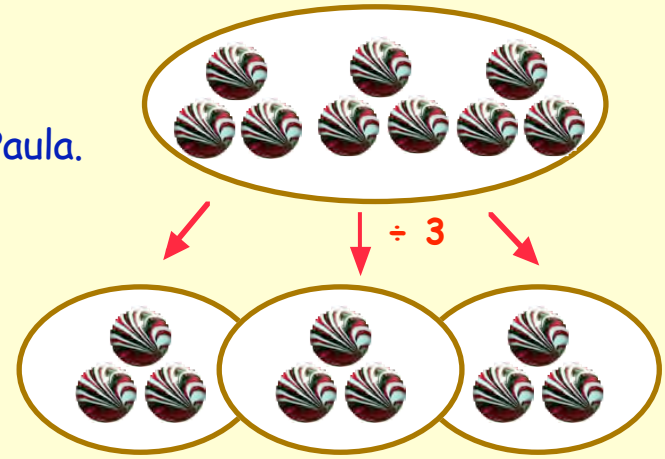
We say that **6 divided by 3 = 2**

or **6 ÷ 3 = 2**

Sarah had **9** marbles.
She shared them with Timmy and Paula.
Sarah, Timmy and Paula each
got **3** marbles.

We say that **9 divided by 3 = 3**

or **9 ÷ 3 = 3**



Exercise 5

1. **Copy** each of these and **complete** :-

a 6 ÷ 3 = ...	**b** 9 ÷ 3 = ...	**c** 18 ÷ 3 = ...
d 15 ÷ 3 = ...	**e** 12 ÷ 3 = ...	**f** 21 ÷ 3 = ...
g 24 ÷ 3 = ...	**h** 27 ÷ 3 = ...	**i** 30 ÷ 3 = ...

2. Find the missing numbers :-

a ◯ ÷ 3 = 3	**b** ◯ ÷ 3 = 6	**c** ◯ ÷ 3 = 7
d ◯ ÷ 3 = 5	**e** ◯ ÷ 3 = 10	**f** ◯ ÷ 3 = 8

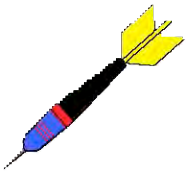
3. Do these questions **mentally**.

a 9 DVD's were divided equally among 3 children.

How many DVD's did each child get ?

b 15 darts were split equally among Ben, Ravi and Nick.

How many darts did each boy get ?



c 12 doughnuts were shared equally among 3 elephants.

How many doughnuts does each elephant get ?

d 3 identical bunches of bananas had a total of 18 bananas on them.

How many bananas were on each bunch ?

When **dividing** into **larger numbers** you have to do the sum in 2 stages.

36 ÷ 3 = ...
can be written as :-

$$\begin{array}{r} 12 \\ 3\overline{)36} \end{array}$$

How many 3's are in the 3 ? ans 1

How many 3's are in the 6 ? ans 2

Worksheet 9·3a

4. **Copy** each of these and **complete** :-

a $3\overline{)30}$	**b** $3\overline{)39}$	**c** $3\overline{)27}$	**d** $3\overline{)90}$
e $3\overline{)66}$	**f** $3\overline{)33}$	**g** $3\overline{)60}$	**h** $3\overline{)96}$
i $3\overline{)99}$	**j** $3\overline{)69}$	**k** $3\overline{)93}$	**l** $3\overline{)63}$

Show ALL Working

5. **a** Three children share out **£33** equally.

How much does each get ?

b 

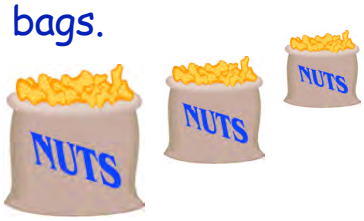
The total number of pencils in three boxes is **69**.

How many pencils are there in each box ?

c Mr Todd ate all the nuts from three identical bags.

He ate **39** nuts in total.

How many nuts were in each bag ?



d Jean, Jemma and Lucy ate **93** chocolates equally amongst them.

How many chocolates did each girl get ?

Dividing by 3 - Remainders

Example 1 :-

37 ÷ 3 = ...

can be written as :- $3\overline{)37}$ = 12 r 1

How many 3's are in 3 ? ans 1

How many 3's are in 7 ? ans 2 r 1

Example 2 :-

remainder 1 is carried

45 ÷ 3 = ...

can be written as :- $3\overline{)45}$ = 15

How many 3's are in 4 ? ans 1 r 1

How many 3's are in 15 ? ans 5

Example 3 :-

remainder 2 is carried and still another remainder appears

53 ÷ 3 = ...

can be written as :- $3\overline{)53}$ = 17 r 2

How many 3's are in 5 ? ans 1 r 2

How many 3's are in 23 ? ans 7 r 2

Exercise 6

Worksheet 9·3b

1. **Copy** each of these and **complete** :-

a 10 ÷ 3 = ...	b 11 ÷ 3 = ...	c 17 ÷ 3 = ...
d 19 ÷ 3 = ...	e 7 ÷ 3 = ...	f 5 ÷ 3 = ...
g 13 ÷ 3 = ...	h 23 ÷ 3 = ...	i 25 ÷ 3 = ...

2. **Copy** each of these and **complete** :-

a $3\overline{)31}$	b $3\overline{)35}$	c $3\overline{)62}$	d $3\overline{)34}$
e $3\overline{)68}$	f $3\overline{)61}$	g $3\overline{)95}$	h $3\overline{)37}$
i $3\overline{)64}$	j $3\overline{)97}$	k $3\overline{)67}$	l $3\overline{)91}$

Show ALL Working

3. a **37** peanuts were divided equally among **three** squirrels.

How many did each get and how many were left over ?

b 

65 fish were shared equally among **3** whales.

How many fish did each whale get and how many were left over ?

c **61** oranges were bought for **three** football teams.

If each team got the same number of oranges, how many did they get and how many were left over ?

d 

95 plants were shared out equally among **3** gardeners.

How many plants did each gardener get and how many were over ?

4. **Copy** and **complete** :-

a	$3\overline{)21}$	b	$3\overline{)27}$	c	$3\overline{)45}$	d	$3\overline{)48}$
e	$3\overline{)51}$	f	$3\overline{)54}$	g	$3\overline{)75}$	h	$3\overline{)72}$
i	$3\overline{)78}$	j	$3\overline{)81}$	k	$3\overline{)84}$	l	$3\overline{)87}$

Show ALL Working

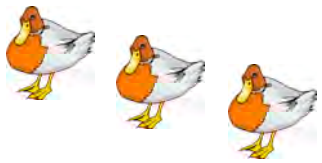
5. a **45** sausages were divided equally over **3** barbeque grills.

How many sausages were on each grill ?

b **87** butterflies were given out equally among **3** butterfly farms.

How many butterflies did each farm get ?

5. c **15** slices of bread were fed equally to **3** ducks.



How many slices did each duck get ?

d 

81 pens were bought for **3** classes.

How many pens did each class get ?

Worksheet 9·4a

6. Copy and **complete** :-

a	$3\overline{)44}$	**b**	$3\overline{)53}$	**c**	$3\overline{)19}$	**d**	$3\overline{)11}$
e	$3\overline{)14}$	**f**	$3\overline{)28}$	**g**	$3\overline{)47}$	**h**	$3\overline{)50}$
i	$3\overline{)77}$	**j**	$3\overline{)86}$	**k**	$3\overline{)59}$	**l**	$3\overline{)88}$

Show ALL Working

7. a **89** cups of tea were laid out for **3** pensioner's outings.

The same number of cups was drunk by each outing.

How many did each outing drink and how many cups were left ?

b 

26 shells were shared equally among **3** girls.

How many shells did each girl get and how many were left over ?

c John, Steve and Craig shared **86** French fries.

Each boy got the same number of fries.

How many fries did they get and how many were left over ?

7. **d**

11 litres of juice was shared equally among **3** classes.

How much juice did each class receive and how many litres were left over ?

e A total of **34** trees had to be planted in **3** orchards.

Each orchard had to have the same number of trees.

How many did each have and how many trees were left ?

f **3** men shared **58** strawberries equally between them.

How many strawberries did each get and how many were left over ?

Worksheet 9·4b

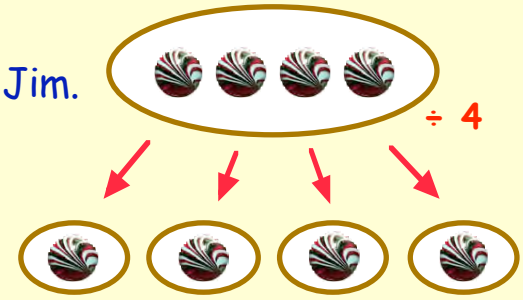
8. **Copy** these "**division by 3**" sums and work them out :-

a $3\overline{)18}$	**b** $3\overline{)22}$	**c** $3\overline{)29}$	**d** $3\overline{)30}$
e $3\overline{)34}$	**f** $3\overline{)39}$	**g** $3\overline{)41}$	**h** $3\overline{)47}$
i $3\overline{)50}$	**j** $3\overline{)53}$	**k** $3\overline{)57}$	**l** $3\overline{)59}$
m $3\overline{)60}$	**n** $3\overline{)62}$	**o** $3\overline{)67}$	**p** $3\overline{)70}$
q $3\overline{)72}$	**r** $3\overline{)75}$	**s** $3\overline{)79}$	**t** $3\overline{)81}$
u $3\overline{)84}$	**v** $3\overline{)89}$	**w** $3\overline{)91}$	**x** $3\overline{)97}$

Divide by 4

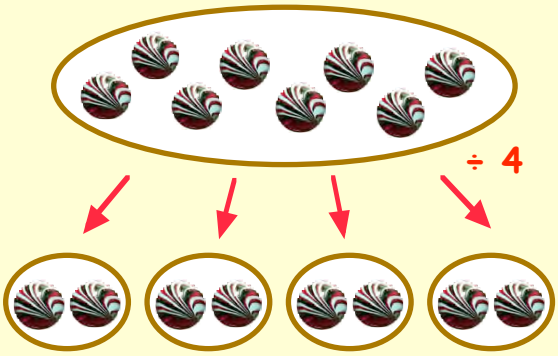
Dividing by **4** is like **sharing** among **four**.

Bert had **4** marbles.
He shared them equally with Al, Tom and Jim.
Bert, Al, Tom and Jim each got **1** marble.



We say that **4 divided by 4 = 1**.

or **4 ÷ 4 = 1**



Mary had **8** marbles.
She shared them with Nan, Di and Jo.
Mary, Nan, Di and Jo each
got **2** marbles.

We say that **8 divided by 4 = 2**

or **8 ÷ 4 = 2**

Exercise 7

1. **Copy** each of these and **complete** :-

a 8 ÷ 4 = ...	**b** 12 ÷ 4 = ...	**c** 24 ÷ 4 = ...
d 20 ÷ 4 = ...	**e** 16 ÷ 4 = ...	**f** 28 ÷ 4 = ...
g 32 ÷ 4 = ...	**h** 36 ÷ 4 = ...	**i** 40 ÷ 4 = ...

2. Find the missing numbers :-

a ☐ ÷ 4 = 3	**b** ☐ ÷ 4 = 6	**c** ☐ ÷ 4 = 7
d ☐ ÷ 4 = 5	**e** ☐ ÷ 4 = 10	**f** ☐ ÷ 4 = 8

3. Do these questions **mentally**.

a Tiddles is given **28** treats to eat equally over **4** days.

How many treats does Tiddles eat each day ?

b

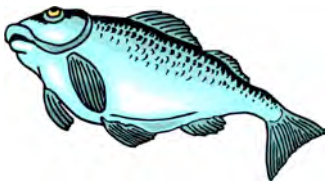
The total number of songs on **4** CD's is **40**.

How many songs are on each CD if they all have the same number ?

c **32** doughnuts are shared equally among Nick, Ravi , Lucy and Ben.

How many doughnuts should each child get ?

d



Four boys went fishing in the loch.

In total, they caught **12** salmon.

If they all caught an equal number, how many salmon did each of them catch ?

e There are **24** wheels on **four** identical trucks .

How many wheels are on each truck ?

Remember

48 ÷ 4 = ...

can be written as :-

$$4\overline{)48} \quad (1\,2)$$

How many 4's are in the 4 ? **ans 1**

How many 4's are in the 8 ? **ans 2**

Worksheet 9·5a

4. **Copy** each of these and **complete** :-

a $4\overline{)40}$ **b** $4\overline{)44}$ **c** $4\overline{)48}$

d $4\overline{)84}$ **e** $4\overline{)88}$ **f** $4\overline{)80}$

Show ALL Working

5. a £44 is the cost of 4 identical T-shirts.

How much does one cost ?

b 

It took Spot 48 seconds to eat 4 similar bones.

How long did it take Spot to eat each bone ?

c The total number of badges collected by 4 children in class 2C was 84.

If each collected the same amount, how many badges did each child collect ?

d 

4 identical bracelets cost a total of £80.

What did one bracelet cost ?

Dividing by 4 - Remainders

Example 1 :-

49 ÷ 4 = ...

can be written as :- $4\overline{)49}$ = 12 r 1

How many 4's are in 4 ? ans 1

How many 4's are in 9 ? ans 2 r 1

Example 2 :-

56 ÷ 4 = ...

can be written as :- $4\overline{)5^{1}6}$ = 14

remainder 1 is carried

How many 4's are in 5 ? ans 1 r 1

How many 4's are in 16 ? ans 4

Example 3 :-

63 ÷ 4 = ...

can be written as :- $4\overline{)6^{2}3}$ = 15 r 3

remainder 2 is carried and still another remainder appears

How many 4's are in 6 ? ans 1 r 2

How many 4's are in 23 ? ans 5 r 3

Exercise 8

Worksheet 9·5b

1. **Copy** each of these and **complete** :-

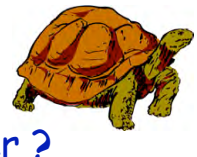
a $15 \div 4 =$	**b** $11 \div 4 =$	**c** $9 \div 4 =$ ....
d $7 \div 4 =$	**e** $21 \div 4 =$	**f** $5 \div 4 =$ ....
g $10 \div 4 =$	**h** $17 \div 4 =$	**i** $19 \div 4 =$ ....

2. **Copy** each of these and **complete** :-

a $4\overline{)41}$	**b** $4\overline{)43}$	**c** $4\overline{)45}$	**d** $4\overline{)49}$
e $4\overline{)81}$	**f** $4\overline{)83}$	**g** $4\overline{)86}$	**h** $4\overline{)89}$

Show ALL Working

3. **a** **18** tortoises were spread equally into **4** pens.



How many did each pen hold and how many were left over ?

b

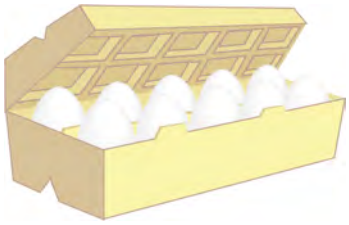
46 plasters were divided among **4** first-aid boxes.

How many plasters went in each box and how many were left over ?

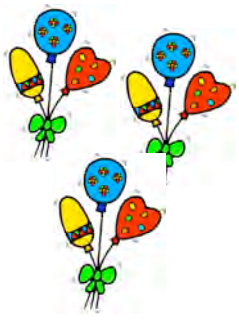
c **4** boxes were used to hold **82** eggs.

Each box had the same number of eggs.

How many eggs were in each box and how many eggs were left over ?



d



For the school fete, **87** balloons in total were blown up and tied around **4** trees.
Each tree had the same number of balloons.

How many balloons did each tree have and how many were over ?

Worksheet 9·6a

4. **Copy** and **complete** :-

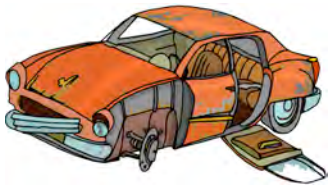
a $4\overline{)16}$	b $4\overline{)24}$	c $4\overline{)36}$	d $4\overline{)56}$
e $4\overline{)52}$	f $4\overline{)64}$	g $4\overline{)60}$	h $4\overline{)76}$
i $4\overline{)92}$	j $4\overline{)96}$	k $4\overline{)72}$	l $4\overline{)68}$

Show ALL Working

5. a **76** cars were taken to **4** car showrooms.

Each showroom got the same number of cars.

How many did each get ?



b 

64 bunches of grapes were spread equally into **4** crushers.

How many bunches were in each crusher ?

c **28** pieces of fruit were divided equally into **four** bowls.

How many pieces of fruit were in each bowl ?

d 

52 cake slices were equally divided into **4** boxes.

How many slices of cake were in each box ?

Worksheet 9·6b

6. **Copy** and **complete** :-

a $4\overline{)63}$	b $4\overline{)54}$	c $4\overline{)71}$	d $4\overline{)53}$
e $4\overline{)74}$	f $4\overline{)95}$	g $4\overline{)51}$	h $4\overline{)97}$
i $4\overline{)99}$	j $4\overline{)29}$	k $4\overline{)57}$	l $4\overline{)61}$

Show ALL Working

7. a **66** flowers were divide equally between **4** vases.

How many flowers were in each vase
and how many flowers were left over ?

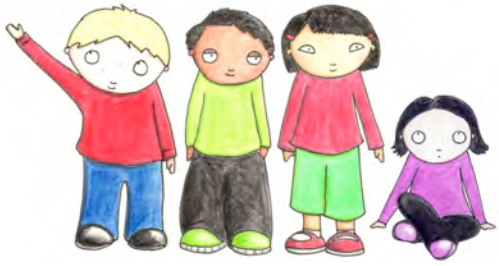
b 

Four clowns had a total of **75** balloons.

If each clown had the same number of balloons, how many balloons did each clown have and how many were left over ?

c Ben, Ravi, Lucy and Jemma tried to share **79p** equally amongst themselves.

How much did each child get
and how much was left over ?



d 

93 fish were fed to **4** dolphins, each getting the same amount.

How many fish did each dolphin get and how many fish were left over ?

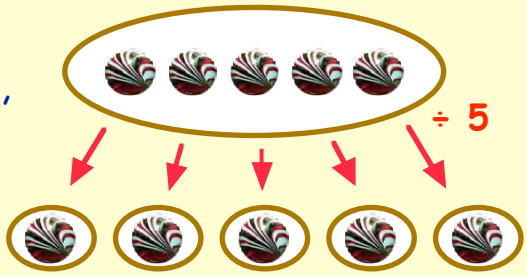
8. **Copy** these "**division by 4**" sums and work them out :-

a	$4\overline{)19}$	b	$4\overline{)25}$	c	$4\overline{)34}$	d	$4\overline{)39}$
e	$4\overline{)44}$	f	$4\overline{)47}$	g	$4\overline{)52}$	h	$4\overline{)58}$
i	$4\overline{)63}$	j	$4\overline{)68}$	k	$4\overline{)73}$	l	$4\overline{)77}$
m	$4\overline{)84}$	n	$4\overline{)87}$	o	$4\overline{)91}$	p	$4\overline{)95}$

Divide by 5

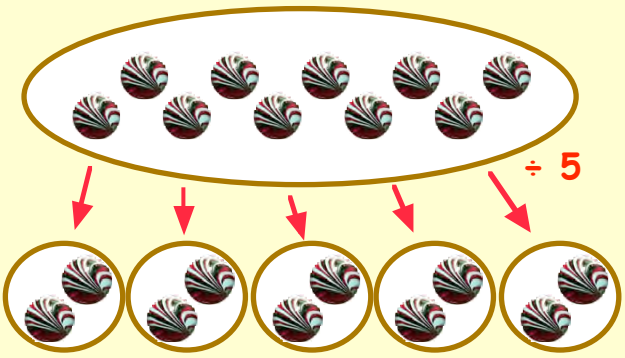
Dividing by **5** is like **sharing** among **five**.

Jim had **5** marbles.
He shared them equally with James, Tom, John and Ann.
Jim, James, Tom, John and Ann each got **1** marble.



We say that **5 divided by 5 = 1**.

or **5 ÷ 5 = 1**



Rhona had **10** marbles.
She shared them with Chas, Tina, Kirsty and Dick.
Rhona, Chas, Tina, Kirsty and Dick each got **2** marbles.

We say that **10 divided by 5 = 2**

or **10 ÷ 5 = 2**

* Also :- **15 ÷ 5 = 3** and **20 ÷ 5 = 4**

Exercise 9

1. **Copy** each of these and **complete** :-

a 20 ÷ 5 = ...	b 30 ÷ 5 = ...	c 35 ÷ 5 = ...
d 25 ÷ 5 = ...	e 15 ÷ 5 = ...	f 40 ÷ 5 = ...
g 55 ÷ 5 = ...	h 45 ÷ 5 = ...	i 50 ÷ 5 = ...

2. Find the missing numbers :-

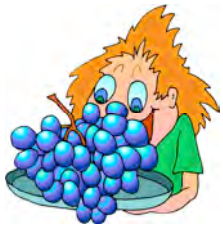
a △ ÷ 5 = 3 **b** △ ÷ 5 = 6 **c** △ ÷ 5 = 7

d △ ÷ 5 = 5 **e** △ ÷ 5 = 10 **f** △ ÷ 5 = 8

3. Do these questions **mentally**.

a Mum shared out **40** grapes equally among **5** children.

How many grapes did each child get ?



b

Five teenagers equally shared a basket of **15** cakes of soap.

How many soaps did each teenager get ?

c **45** bubblegums are to be divided up between **five** boys.

How many bubblegums should each boy get ?

d

A total of **50** bubbles were blown from a hoop by **5** girls.

If each girl blew the same number of bubbles. how many bubbles did each of them blow ?

e **Five** artists shared out **55** crayons amongst themselves.

Each artist got the same number of crayons.

How many crayons did each receive ?

f

20 pots were split equally between **5** shelves.

How many pots did each shelf hold ?

Dividing by 5 - Remainders

Example 1 :-

58 ÷ 5 = ...

can be written as :- $5\overline{)58}$ = 11 r 3

How many 5's are in 5 ? ans 1

How many 5's are in 8 ? ans 1 r 3

Example 2 :-

65 ÷ 5 = ...

can be written as :- $5\overline{)65}$ = 13

remainder 1 is carried

How many 5's are in 6 ? ans 1 r 1

How many 5's are in 15 ? ans 3

Example 3 :-

92 ÷ 5 = ...

can be written as :- $5\overline{)92}$ = 18 r 2

remainder 4 is carried and still another remainder appears

How many 8's are in 9 ? ans 1 r 4

How many 5's are in 42 ? ans 8 r 2

Exercise 10

Worksheet 9·7a

1. **Copy** each of these and **complete** :-

a 11 ÷ 5 = ...	b 17 ÷ 5 = ...	c 21 ÷ 5 = ...
d 8 ÷ 5 = ...	e 18 ÷ 5 = ...	f 9 ÷ 5 = ...
g 6 ÷ 5 = ...	h 13 ÷ 5 = ...	i 19 ÷ 5 = ...

2. **Copy** each of these and **complete** :-

a $5\overline{)50}$	b $5\overline{)56}$	c $5\overline{)53}$	d $5\overline{)57}$
e $5\overline{)58}$	f $5\overline{)55}$	g $5\overline{)52}$	h $5\overline{)59}$

Show ALL Working

3. a **51** light bulbs were packed equally into **5** boxes.

How many did each box hold and how many were left over ?

b 

54 managers sat around tables which seated **5** people.

How many tables had **5** managers sitting round them and how many managers were at the other table ?

c Workmen have to work in groups of **five** to build a car.

If there are **59** men at work, how many cars can be built and how many workmen are left not working ?

Worksheet 9·7b

4. **Copy** and **complete** :-

a $5\overline{)40}$	b $5\overline{)70}$	c $5\overline{)75}$	d $5\overline{)55}$
e $5\overline{)60}$	f $5\overline{)85}$	g $5\overline{)45}$	h $5\overline{)50}$
i $5\overline{)80}$	j $5\overline{)65}$	k $5\overline{)90}$	l $5\overline{)100}$

Show ALL Working

5. a In a shop **35** jumpers were divided equally on **5** rails.

How many jumpers were on each rail ?

b 

A farmer divided **95** potatoes equally into **5** sacks.

How many potatoes were in each sack ?

5. c Grandpa gave his **5** grandchildren **90** lollipops to share equally.

How many lollipops did each get ?

d 

70 golf balls were divided equally among **five** golfers.

How many golf balls did each golfer get ?

6. Copy and complete :-

Worksheet 9·8a

a $5\overline{)37}$	**b** $5\overline{)41}$	**c** $5\overline{)94}$	**d** $5\overline{)54}$
e $5\overline{)88}$	**f** $5\overline{)63}$	**g** $5\overline{)69}$	**h** $5\overline{)72}$
i $5\overline{)56}$	**j** $5\overline{)48}$	**k** $5\overline{)96}$	**l** $5\overline{)99}$

Show ALL Working

7. a **66** footballs were to be delivered to **5** sports shops.

If each shop received the same number, how many footballs did each shop get and how many were left over ?

b 

82 cinema tickets were to be divided equally among **5** classes.

How many tickets did each class get and how many tickets were left over ?

c A total of **38** sweets are to be split equally among **5** party bags.

How many sweets are in each bag and how many are left over ?

7. d 

Five boxes were used to store **79** candles.

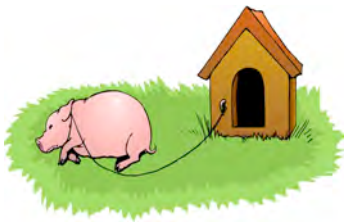
They were to be divided equally among the boxes.

How many candles were left over ?

e **5** stys were used to house **31** pigs.

The pigs were divided equally among the stys.

How many pigs were left out ?



f 

78 horses were moved in equal numbers into **5** fields.

How many horses were left without a field ?

g **59** fields had to be ploughed.

The farmer had **5** tractors for this.

If each tractor ploughed the same number of fields, how many fields were able to be ploughed and how many were not ploughed ?

Worksheet 9·8b

8. **Copy** these "**division by 5**" sums and work them out :-

a	$5\overline{)19}$	b	$5\overline{)38}$	c	$5\overline{)67}$	d	$5\overline{)81}$
e	$5\overline{)62}$	f	$5\overline{)76}$	g	$5\overline{)93}$	h	$5\overline{)29}$
i	$5\overline{)34}$	j	$5\overline{)85}$	k	$5\overline{)70}$	l	$5\overline{)99}$
m	$5\overline{)55}$	n	$5\overline{)73}$	o	$5\overline{)64}$	p	$5\overline{)91}$
q	$5\overline{)43}$	r	$5\overline{)68}$	s	$5\overline{)88}$	t	$5\overline{)65}$

Divide by 10

Dividing by **10** is like **sharing** between **ten**.

10 marbles are shared equally between **10** boys.
They all get **1** marble each.

We say that **10 divided by 10 = 1**.

or **10 ÷ 10 = 1**

20 marbles are shared equally between **10** girls.
They all get **2** marbles each.

We say that **20 divided by 10 = 2**

or **20 ÷ 10 = 2**

* Also :- **30 ÷ 10 = 30 ÷ 10 = 3** and **40 ÷ 10 = 4**

When you divide by 10, simply remove the 0 from the end

Exercise 11

1. Use the quick method of **removing the zero** to work out :-

a 70 ÷ 10 = ...	**b** 40 ÷ 10 = ...	**c** 80 ÷ 10 = ...
d 90 ÷ 10 = ...	**e** 60 ÷ 10 = ...	**f** 30 ÷ 10 = ...
g 20 ÷ 10 = ...	**h** 50 ÷ 10 = ...	**i** 100 ÷ 10 = ...

2. Find the missing numbers :-

a ☐ ÷ 10 = 3 **b** ☐ ÷ 10 = 6 **c** ☐ ÷ 10 = 7

d ☐ ÷ 10 = 5 **e** ☐ ÷ 10 = 9 **f** ☐ ÷ 10 = 8

3. Do these questions **mentally**.

a In a sponsored run, **10** people ran a total of **30** miles.

If each person ran the same distance, how far did each person run ?

b 

70 teabags were divided equally among **10** pensioners.

How many teabags did each pensioner get ?

c **10** children shared **90** strawberries among themselves.

How many strawberries did each child get ?

d 

The total number of pages in **ten** comics is **100**.

How many pages does each comic have ?

4. **Copy** and **complete** **by removing the last zero** :-

a 30 ÷ 10 = ... **b** 50 ÷ 10 = ... **c** 80 ÷ 10 = ...

d 100 ÷ 10 = ... **e** 120 ÷ 10 = ... **f** 170 ÷ 10 = ...

g 200 ÷ 10 = ... **h** 230 ÷ 10 = ... **i** 350 ÷ 10 = ...

j 400 ÷ 10 = ... **k** 450 ÷ 10 = ... **l** 500 ÷ 10 = ...

Topic in a Nutshell

1. **Copy** each of these and **complete** :-

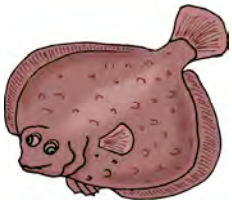
a $2\overline{)18}$	**b** $3\overline{)24}$	**c** $4\overline{)28}$	**d** $5\overline{)40}$
e $10\overline{)90}$	**f** $2\overline{)37}$	**g** $3\overline{)48}$	**h** $4\overline{)71}$
i $5\overline{)56}$	**j** $10\overline{)40}$	**k** $3\overline{)58}$	**l** $4\overline{)73}$

2. **a** A total of **72** tomatoes were delivered to **2** supermarkets.

Each supermarket received the same amount of tomatoes.

How many tomatoes did each supermarket receive ?

b



82 flounders were divided equally into **3** rivers.

How many flounders were put in each river and how many were left without a river ?

c **51** roosters were split equally into **four** pens.

How many roosters were in each pen and how many were left over ?

d

A car salesman sold a total of **75** cars over **5** days.

He sold the same number of cars each day.

How many cars did he sell each day ?

e The total number of seats on **10** identical minibuses is **120**.

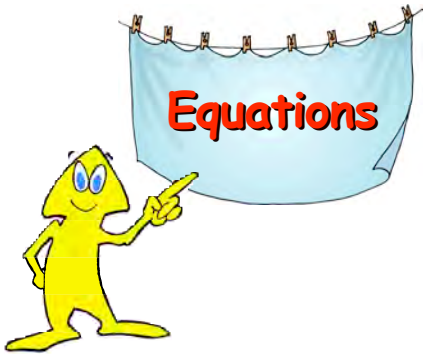
How many seats does each bus have ?

3. Find the missing numbers :-

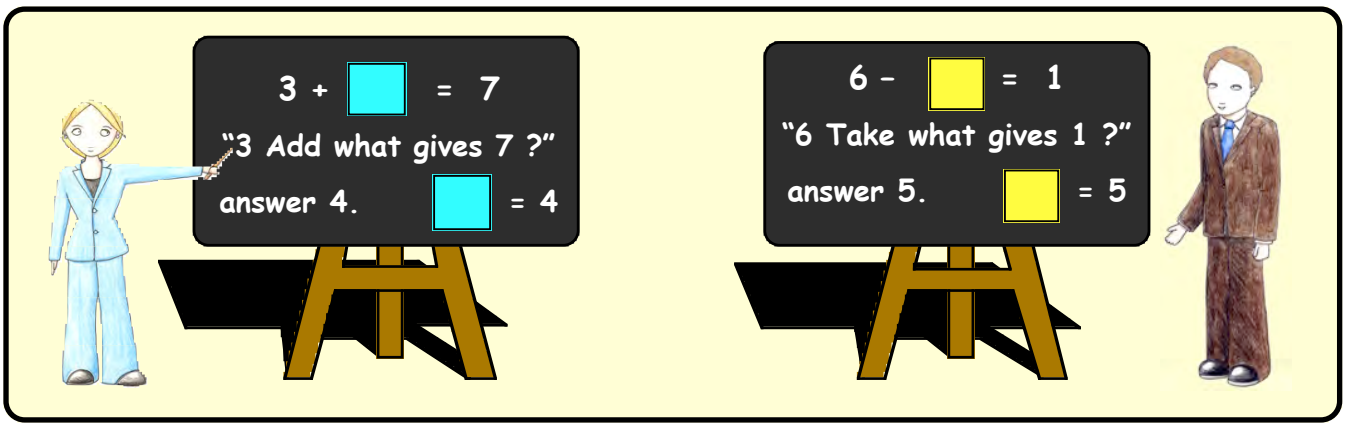
a ★ ÷ 2 = 9	**b** ★ ÷ 3 = 7	**c** ★ ÷ 4 = 9
d ★ ÷ 5 = 8	**e** ★ ÷ 10 = 6	**f** ★ ÷ 10 = 50

Chapter 10

Calculators should NOT be used.



Finding the Missing Number



Exercise 1

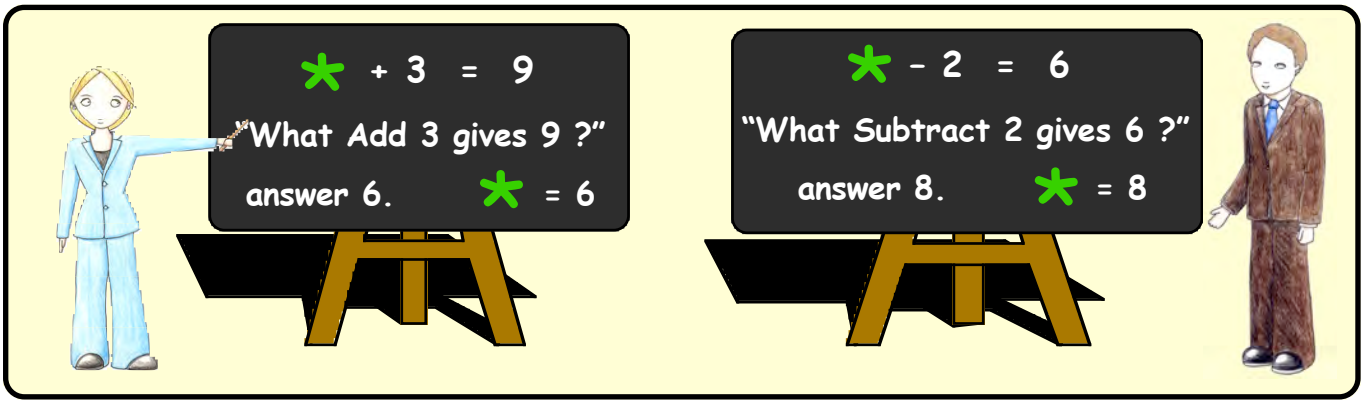
1. What **number** does the □ stand for in each of the following ?

a $2 + \square = 5$	b $4 + \square = 7$	c $5 + \square = 6$
d $7 + \square = 9$	e $3 + \square = 10$	f $1 + \square = 9$
g $3 + \square = 8$	h $7 + \square = 7$	i $5 + \square = 12$
j $2 + \square = 15$	k $3 + \square = 13$	l $7 + \square = 16$

2. Find what number the ○ stands for in each of these :-

a $6 - \bigcirc = 5$	b $4 - \bigcirc = 1$	c $9 - \bigcirc = 3$
d $8 - \bigcirc = 2$	e $5 - \bigcirc = 5$	f $7 - \bigcirc = 0$
g $10 - \bigcirc = 2$	h $11 - \bigcirc = 4$	i $16 - \bigcirc = 4$
j $17 - \bigcirc = 16$	k $14 - \bigcirc = 8$	l $15 - \bigcirc = 12$

Equations



Exercise 2

Worksheet 10·1a

1. What **number** does the ★ sign stand for in each of these :-

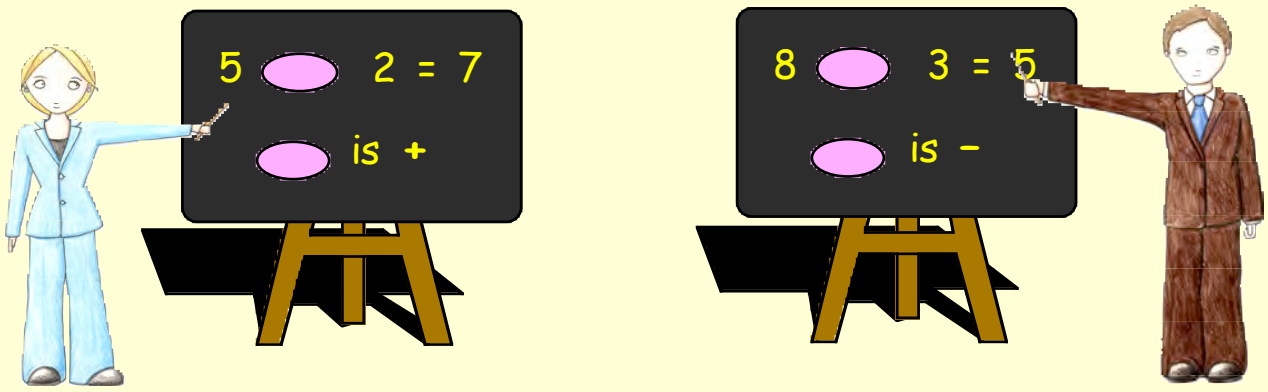
a ★ + 4 = 7	b ★ + 5 = 8	c ★ + 2 = 10
d ★ + 0 = 5	e ★ + 10 = 14	f ★ + 12 = 17
g ★ + 18 = 20	h ★ + 15 = 25	i ★ + 19 = 23
j ★ + 15 = 26	k ★ + 9 = 24	l ★ + 25 = 30
m ★ - 2 = 4	n ★ - 7 = 1	o ★ - 1 = 3
p ★ - 3 = 7	q ★ - 5 = 6	r ★ - 8 = 4

2. What **number** does the # sign stand for in each of these :-

a 3 + # = 9	b 5 + # = 15	c 2 + # = 11
d 7 - # = 4	e 9 - # = 3	f 10 - # = 5
g # + 6 = 20	h # + 7 = 18	i # + 13 = 19
j # - 3 = 8	k # - 6 = 14	l # - 10 = 7
m 12 + # = 18	n # - 4 = 7	o 10 + # = 15

Find the Missing Signs

The symbol ⬭ is covering up the ADD (+) or SUBTRACT (–) sign.



Exercise 3

Worksheet 10·1b

1. The symbol ⬭ in this question is covering up either the + or – sign.
   Which one ?

a 1 ⬭ 1 = 0	b 2 ⬭ 4 = 6	c 5 ⬭ 6 = 11
d 7 ⬭ 8 = 15	e 9 ⬭ 3 = 6	f 10 ⬭ 2 = 8
g 17 ⬭ 5 = 12	h 13 ⬭ 7 = 20	i 19 ⬭ 8 = 11
j 18 ⬭ 7 = 25	k 20 ⬭ 10 = 30	l 29 ⬭ 28 = 1

2. **Copy** each of these and put in the correct sign (+ or –).

a 7 ... 5 = 2	b 8 ... 3 = 11	c 4 ... 7 = 11
d 10 ... 2 = 8	e 1 ... 2 = 3	f 15 ... 13 = 2
g 7 ... 7 = 0	h 7 ... 7 = 14	i 20 ... 5 = 25

Making an Equation to find an Answer

EXTENSION

Example 1

Ravi had 3 oranges. He bought some more !

He now has 7 oranges. How many did he buy ?

equation : - 3 + ☐ = 7.

☐ = 4.

=> **He bought 4 oranges.**

Example 2

Lucy had 10 pencils. She gave some to Ted. She then had 8 left.

How many had she given to Ted ?

equation : - 10 - ○ = 8.

○ = 2.

=> **She gave Ted 2 pencils.**

Exercise 4

For each of these, an **equation** has been given.

Use the **equation** to work out the **answer**.

1. **4** people were on a train. Some more people get on.

   There are now **9** people on the train.

   How many people must have got on ?

equation : - 4 + ☐ = 9.

2. Sally's mum started to boil **5** eggs.

   She then boiled some more eggs for her son.

   She boiled **7** eggs altogether.

   How many eggs did she boil for her son ?

equation : - 5 + △ = 7.

3. Alan ran the race in 7 minutes.
Joe finished a few minutes after that.
Joe's time was 11 minutes.

How much longer did Joe take ?

equation : - 7 + ◆ = 11.

4. 

9 plants began to bloom in the garden last week.
This week some more have began to bloom.
There are now 15 plants out in the garden.

How many plants bloomed in that second week ?

equation : - 9 + ⬢ = 15.

5. Bertha had 16 chips on her plate.

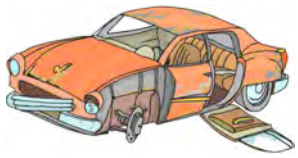
She ate some of them. She then had 5 left.

How many chips did Bertha eat ?

equation : - 16 - ▭ = 5.

6. Yesterday, 20 cars were in a garage.
The salesman sold some of the cars.
There are now only 14 in the garage.

How many cars were sold ?



equation : - 20 - ◆ = 14.

7. Old Granny Soutter still had 10 teeth.
She fell and knocked some out.
She now only has 3 teeth.

How many teeth did she lose ?

equation : - 10 - ⬟ = 3.

Topic in a Nutshell

1. What **number** does the ☐ stand for ?

a 4 + ☐ = 8 **b** 3 + ☐ = 9 **c** 5 + ☐ = 15

d 8 + ☐ = 17 **e** 9 + ☐ = 23 **f** 10 + ☐ = 30

g 7 - ☐ = 1 **h** 12 - ☐ = 12 **i** 11 - ☐ = 2

2. What **number** does the ★ stand for ?

a ★ + 6 = 9 **b** ★ + 5 = 11 **c** ★ + 8 = 17

d ★ + 3 = 20 **e** 10 - ★ = 2 **f** ★ + 21 = 30

g ★ - 1 = 6 **h** ★ - 5 = 8 **i** 18 - ★ = 10

4. The Ω stands for either + or - in this question. Which one ?

a 1 Ω 5 = 6 **b** 2 Ω 7 = 9 **c** 8 Ω 3 = 5

d 9 Ω 9 = 0 **e** 15 Ω 4 = 11 **f** 13 Ω 7 = 20

g 14 Ω 5 = 19 **h** 21 Ω 8 = 13 **i** 6 Ω 23 = 29

j 30 Ω 4 = 26 **k** 29 Ω 28 = 1 **l** 15 Ω 15 = 30

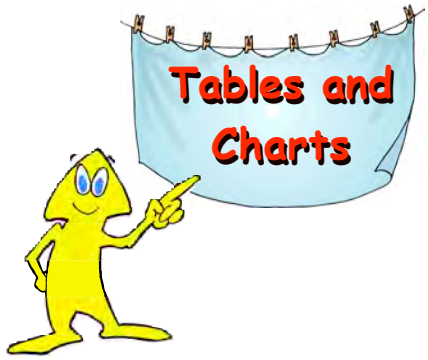
5. There are **14** wheels on a lorry.
Some of them are new.
9 of them are **not** new.

How many were new ?

equation : - 14 - ⬠ = 9.

Chapter 11

Calculators should NOT be used.



Tally Marks and Tables

This list shows the favourite colours of a Primary 2 Class.

Pink	Blue	Black	Green	Blue
Blue	Black	Red	Black	Blue
Black	Blue	Green	Green	Red

A **tally table** can make a big list easier to understand.

Colour	Tally	Total
Pink	I	1
Red	II	2
Black	IIII	4
Blue	IIIII	5
Green	III	3

Can you see that :-

1 pupil chose pink.

2 pupils chose red.

Exercise 1

1. Look at the tally table above.

a How many pupils chose **blue** ?

b How many pupils chose **green**. ?

c How many pupils chose **black**. ?

d What was the most **popular** colour ?

e How many **more** pupils chose **blue** than **red** ?

f How many **less** pupils chose **pink** than **black** ?

g How many pupils were asked **altogether** ?

Worksheet 11 · 1 Use **worksheet 11 · 1** to help answer questions 2-7.

2. This tally table shows the favourite colours of a P3 class.

Colour	Tally	Total
Pink	| | |	3
Red	|	See worksheet 11 · 1
Black	| | | | | |	
Blue	| | | |	...
Green	| |	...

a **Use worksheet 11 · 1** to complete the tally table.

b How many pupils were in the Primary 3 class ?

3. This tally table shows how a class makes their way to school.

To School	Tally	Total
Car	| | | |	4
Taxi	|	...
Bus	See worksheet 11 · 1	5
Walk		8
Train	| |	...

a **Use worksheet 11 · 1 to complete** the tally table.

b How many **more** pupils **walked** than took the **train** ?

c How many pupils did **not** take the **bus** ?

4. This tally table shows the ages of a group of children at a party.

Age	Tally	Total
six	| | | |	4
seven	|	...
eight	... See worksheet 11 · 1	5
nine	...	8
ten	| | |	
eleven	...	1
twelve	| |	...

a **Use worksheet 11 · 1 to complete** the tally table.

b How many pupils are aged **seven** ?

c How many **more** pupils are aged **ten** than **eleven** ?

d How many pupils are **older** than **eight** ?

5. This list shows the hair colour of a Primary 2 class.

Blonde	Light Brown	Dark Brown	Light Brown
Light Brown	Black	Dark Brown	Red
Blonde	Black	Dark Brown	Black
Red	Light Brown	Red	Light Brown

a **Use worksheet 11·1 to complete** the tally table.

Colour	Tally	Total
Blonde		
Red	See worksheet 11·1	
Black		
Dark Brown		
Light Brown		

b What hair colour did **most** have ?

c What hair colour was there **least** of ?

d How many pupils were asked **altogether** ?

e How many pupils did **not** have **black** hair ?

6. A group of teachers were asked their favourite drink at lunchtime.

Tea	Irn Bru	Tea	Coffee
Orange	Irn Bru	Irn Bru	Irn Bru
Water	Tea	Orange	Orange
Coffee	Orange	Water	Irn Bru
Irn Bru	Coffee	Tea	Orange

a **Use worksheet 11·1 to complete** the tally table.

Drink	Tally	Total
Tea		
Orange	See worksheet 11·1	
Water		
Irn Bru		
Coffee		

b What was the **most** popular drink ?

c What was the **least** popular drink ?

d How many **more** teachers liked **Irn Bru** than Water.

e How many teachers **altogether** were asked ?

7. Pupils in a Primary 3 class were given a test grade of A, B, C, D, E or F.

F	C	D	B	A	C	C	B
B	A	A	D	B	B	B	C
B	B	C	A	C	C	B	B

a **Use worksheet 11·1 to complete** the tally table.

Grade	Tally	Number
A		
B		

b How many pupils got grade **B** ?

c How many pupils got grade **E** ?

d How many **more** pupils were graded **B** than **C** ?

e How many pupils were given the test ?

8. Use tally marks to show the number :-

a 3 (= III) **b** 5 **c** 4 **d** 8

e 2 **f** 6 **g** 10 **h** 24

Count these tally marks IIIIIIIIIIIIIIIIIIIIIIIIII. (25 or 26?)

Can you see how easy it is to lose count with big numbers ?

It is easier to put tally marks in groups of 5's.

𝍸	𝍸	𝍸	𝍸	𝍸	I
5	5	5	5	5	1

(26 in total)

9. What **numbers** do these tally marks show ?

a 𝍸 𝍸 ||

b 𝍸 𝍸

c 𝍸 𝍸 |||

d 𝍸 𝍸 𝍸 |||

e 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||

10. Use tally marks (**in groups of 5's**) to show the number :-

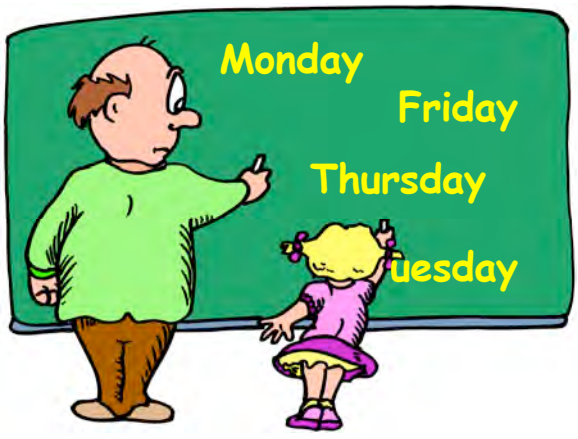
a 5	**b** 10	**c** 20	**d** 13
e 19	**f** 25	**g** 31	**h** 39

11. Pupils were asked to name their favourite day of the school week.

Thursday	Friday	Tuesday	Monday	Tuesday
Tuesday	Thursday	Friday	Tuesday	Tuesday
Friday	Tuesday	Friday	Friday	Wednesday
Monday	Friday	Thursday	Wednesday	Monday
Thursday	Wednesday	Friday	Friday	Monday
Friday	Tuesday	Friday	Thursday	Wednesday

Make a **tally table** for this list.

(Remember to put your tally marks in **groups** of **fives**).



Reading from Tables

You can read information easily from a **table** or **chart**.

This **table** shows the number visitors to the school office one week.

There were **9** visitors on **Monday**.

There were **5** visitors on **Wednesday**.

DAY	visitors
Monday	9
Tuesday	3
Wednesday	5
Thursday	6
Friday	17

Exercise 2

1. Look at the table above.

a How many visitors went to the office on **Tuesday** ?

b How many visitors went to the office on **Thursday** ?

c How many visitors went to the office on **Friday** ?

d How many visitors were there **altogether** ?

2. School Sports Day is on Friday.

The table shows the times of the events.

Starting Times	Competition
1 pm	100 m race
2 pm	Javelin
3 pm	Hurdles
4 pm	200 m race

a What time did the **Hurdles** competition take place ?

b What time did the **200 m** race take place ?

c What competition starts at **2 pm** ?

3. Ravi and Jane counted the number of sweets they ate one weekend.

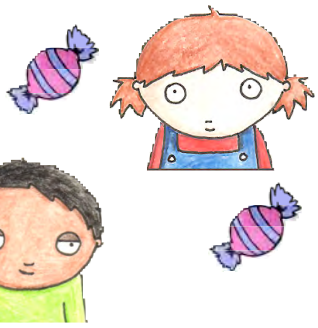
Can you see from the table Ravi ate **11** sweets on **Friday** ?

	Fri	Sat	Sun
Ravi	11	7	18
Jane	9	14	14


a How many sweets did Ravi eat on **Saturday** ?

b How many sweets did Jane eat on **Sunday** ?

c Who ate the most sweets **altogether** ?




4. Lucy looks at a TV paper guide.

	4 pm	5 pm	6 pm
BBC 1	Alien Dad	Super-Boy	Mr. Fred
BBC 2	High Five	News	Simpson

a What is on **BBC 1** at **5 pm** ?

b What is on **BBC 2** at **6 pm** ?

c At what **time** and on what **channel** is the News ?

5. Each month Lucy and Ben save their money in a bank.

	March	April	May	June
Lucy	£10	£14	£5	£15
Ben	£12	£10	£5	£10

a How much did **Ben** save in **May** ?

b How much money did **Lucy** save in **June** ?

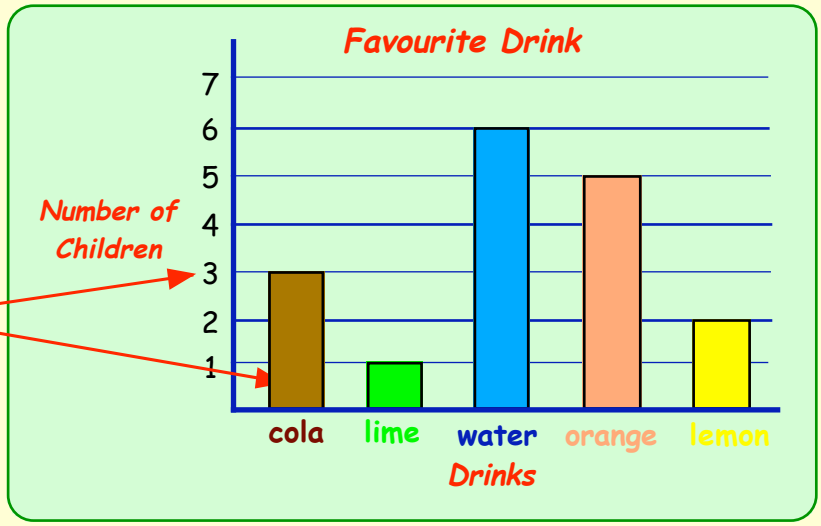
c How much did they **both** save **altogether** in **April** ?

d Who saved **more** money in **March** ? (How much more ?)

Reading Bar Graphs

The bar graph shows the number of people who like various drinks

3 pupils liked cola.



Exercise 3

1. Look at the bar graph above.

a How many pupils liked **cola** ?

b How many pupils liked **lime** ?

c How many pupils liked **water** ?

d How many pupils liked **lemon** ?

e How many pupils liked **orange** ?

f What was the **most** popular drink ?

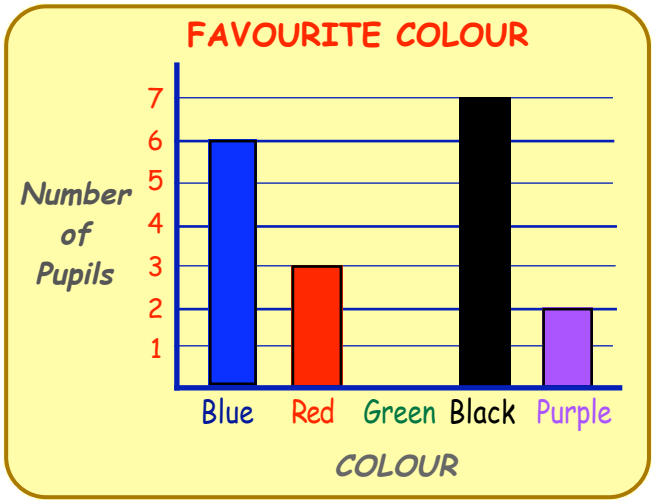
g What was the **least** popular drink ?

h How many **more** pupils chose **orange** than **cola** ?

i How many pupils were asked in **total** ?

j How many pupils did **not** choose **water** ?

2. This bar graph show the favourite colours of a Primary 1 class.



a How many pupils chose **blue** ?

b How many pupils chose **red** ?

c How many pupils chose **black** ?

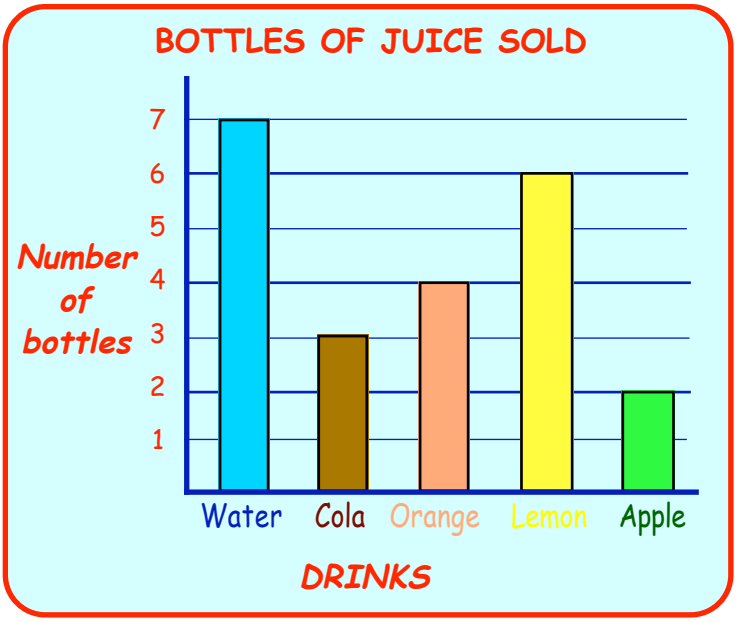
d How many pupils chose **purple** ?

e How many pupils chose **green** ?

f What was the **most** popular colour ?

g How many pupils **altogether** were in this class ?

3. This bar graph shows the number of drinks sold at a tuck shop.



a How many bottles of **each** drink were sold ?

b What was the **most** popular drink ?

c What was the **least** popular drink ?

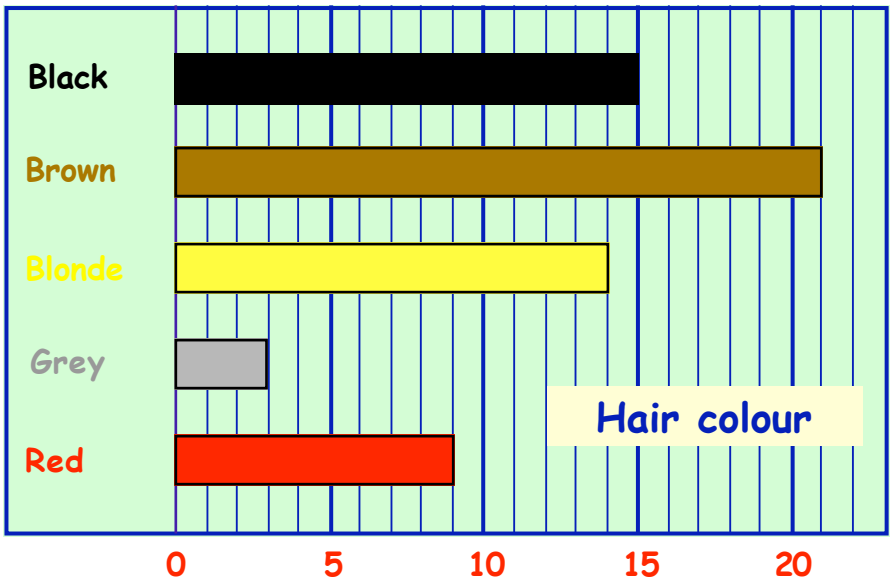
d How many **more** bottles of **water** than **apple** were sold ?

e How many **more** bottles of **orange** than **cola** were sold ?

f How many bottles were sold **altogether** ?

4. This bar graph shows the colour of hair of a group of people.

This time the bars go across the way.



a How many people had **black** hair ?

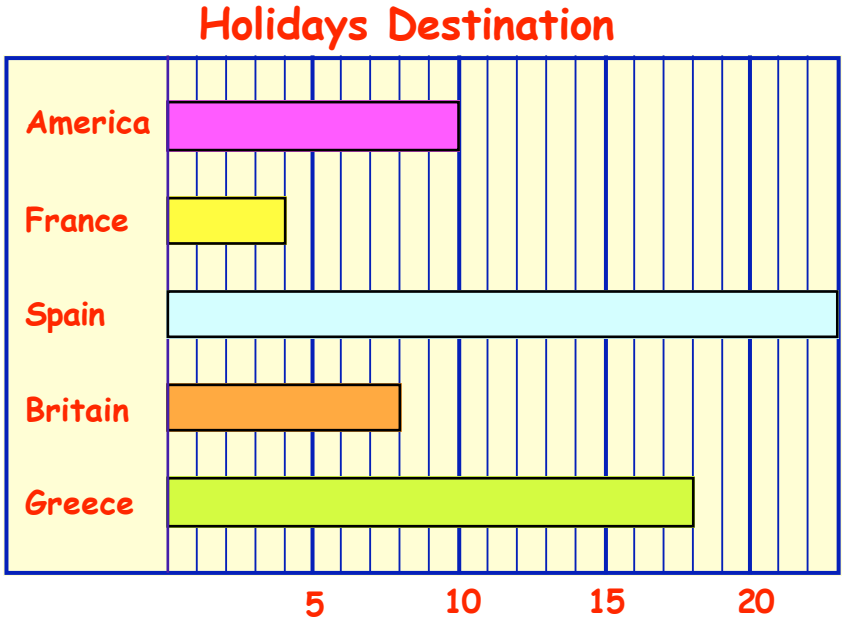
b How many people had **blonde** hair ?

c How many people had **red** hair ?

d How many **more** people had **blonde** than **grey** hair ?

e How many **more** people had **brown** than **red** hair ?

5. Some people were asked to name their favourite holiday country.



a Where did **most** people like to go on holiday ?

b What was the **least** popular place ?

c How many **more** people chose **Spain** than **France** ?

d How many people did **not** choose **Greece** as their favourite holiday spot.

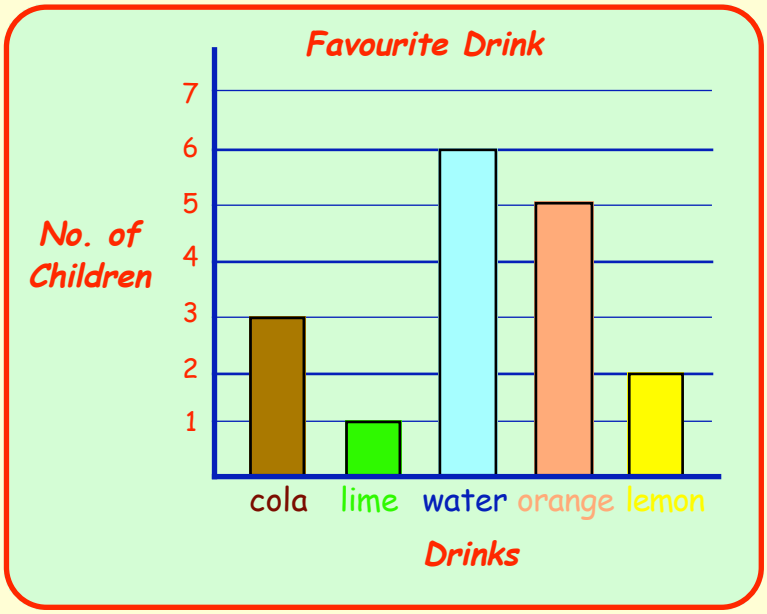
Making Bar Graphs

A **bar graph** can be made from a table of values.

Example

This table can be made into the bar graph shown.

Cola	-	3
Lime	-	1
Water	-	6
Orange	-	5
Lemon	-	2



A **bar graph** needs :-

- a title
- lines
- headings
- labels
- and bars.

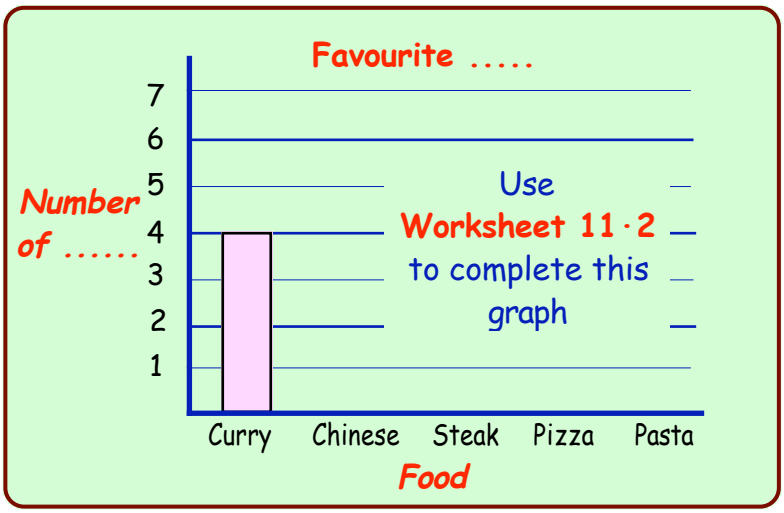
Exercise 4

Worksheet 11·2

1. This table shows the favourite food of a Primary 3 class.

   Use **Worksheet 11·2** to complete the bar graph (shown below).

Food	Pupils
Curry	4
Chinese	7
Steak	3
Pizza	4
Pasta	1



2. This table shows the favourite weekday chosen by a Primary 7 class.

Monday	Tuesday	Wednesday	Thursday	Friday
3	1	5	4	8

Use **Worksheet 11·2** to complete the bar graph.

(***Remember - title, lines, headings, labels and bars***)

3. This table shows the favourite sport chosen by a group of people.

Sport	Total
Snooker	4
Football	9
Golf	3
Swimming	1
Rugby	2

Use **Worksheet 11·2** to complete the bar graph.

4. This table shows the choice of holiday made by a group of workers.

America	- 2	France	- 6	Spain	- 7
Italy	- 1	U.K.	- 3	Africa	- 2

Use **Worksheet 11·2** to complete the bar graph.

5. Ask your teacher if you should do the following :-

Carry out a survey of your choice.

Collect information from your class or at home.

Make a **bar graph** to show your information.

Topic in a Nutshell

Worksheet 11 · 3

1. Look at the tally table.

Colour	Tally	Total
pink	II	2
red	IIII	4
black	III	3
blue	IIIIII	6
green	I	1

a How many chose **pink** ?

b How many chose **black** ?

c What was the most popular colour ?

d How many did **not** choose **blue** ?

2. Look at the table of favourite pets.

fish	dog	fish	cat
mouse	dog	dog	dog
bird	fish	mouse	mouse
cat	mouse	bird	dog
dog	cat	fish	mouse
dog	dog	cat	cat
bird	dog	cat	dog

Pet	Tally	Number
fish		
mouse		

Complete the tally table on **worksheet 11 · 3** to show this information.

3. The table shows films in local cinemas.

Cinema	Film
ABC	Cars
UCA	Monsters
VU	Z - Men
Show	War

a What **film** is on at **ABC** ?

b What **film** is on at **VU** ?

c What **cinema** is showing ***Monsters*** ?

d What **cinema** is showing ***War*** ?

4. Jack and Jill save money each month.

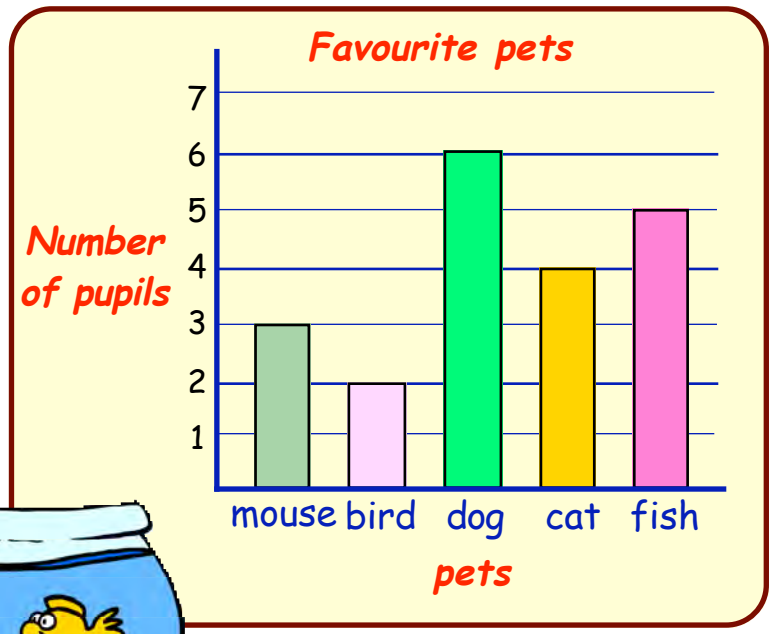
	April	May	June	July
Jack	£9	£11	£12	£18
Jill	£12	£10	£8	£10

a How much did **Jack** save in **May** ?

b How much did **Jill** save in **June** ?

c How much **more** did **Jack** save than **Jill** **altogether** ?

5. The bar graph shows the favourite pet chosen by a group of pupils.



a How many pupils have a **dog** ?

b How many pupils have a **fish** ?

c How many pupils were asked **altogether** ?

6. The table shows how some pupils get to school.

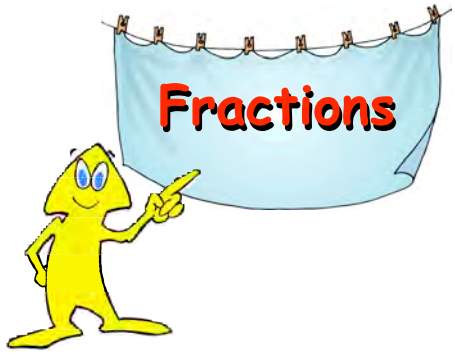
Travel	Total
bus	5
walk	9
car	3
taxi	1
train	2

Complete the **bar graph** on **Worksheet 11·3** to show this information.

(*Remember title and labels*).

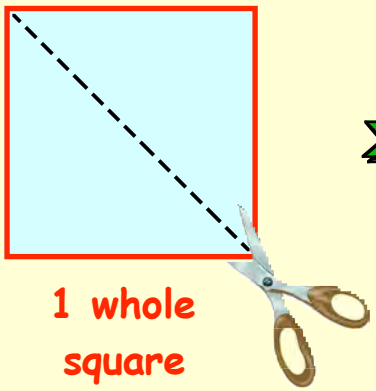
Chapter 12

Calculators should NOT be used.

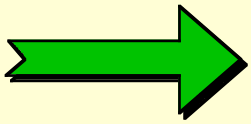


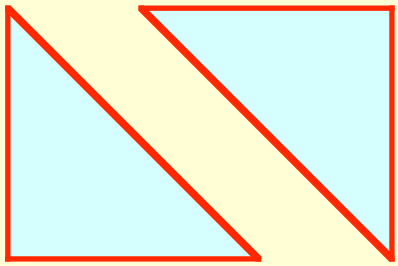
Half of Something

If you cut a shape into 2 **equal** bits, each bit is called a **half**.



1 whole square





a half square

a half square

A **half** is written like this :-

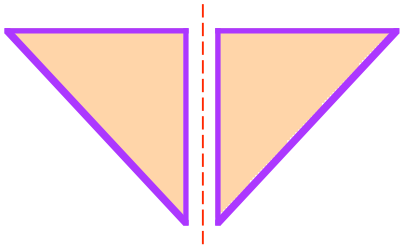
$\frac{1}{2}$ ← one "bit" out of the 2 "bits"

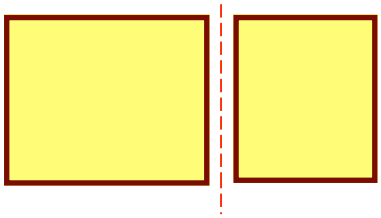
Two **halves** put back together make a **whole**.

Exercise 1

1. Practice writing the **half** symbol (10 times) - $\frac{1}{2}$

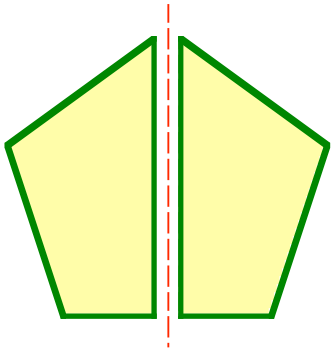
2. Has this triangle been cut in **half** ?



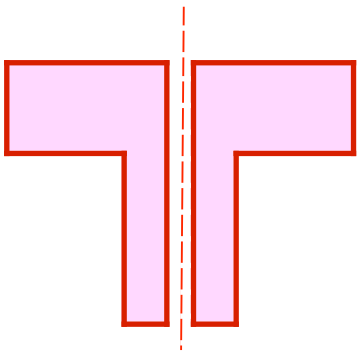
3. 

Has this rectangle been cut in $\frac{1}{2}$?

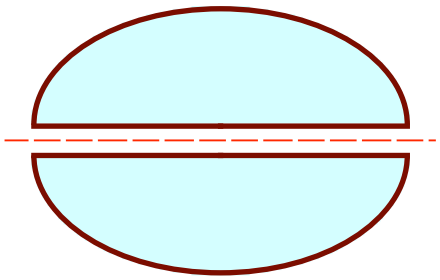
4. Which of these shapes have been cut **exactly** in **half** ?



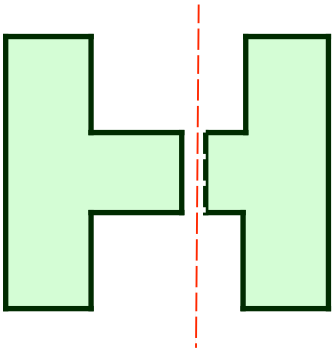
shape A



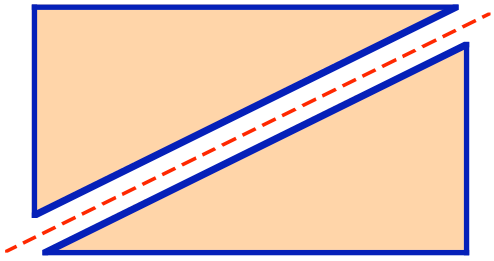
shape B



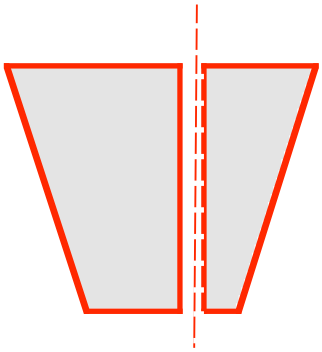
shape C



shape D

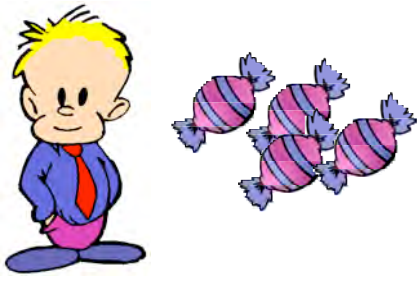


shape E



shape F

5. Tim and Lorna had 10 sweets. They tried to share them equally.



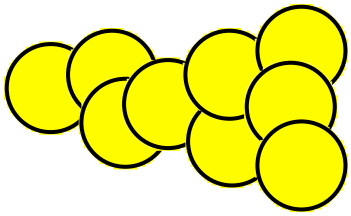
Tim's sweets

Lorna's sweets

a Did they each get **exactly half** of the sweets ?

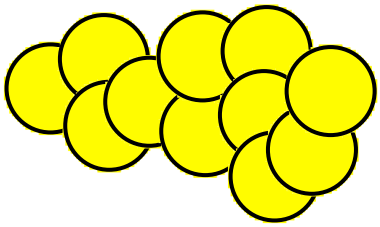
b How many should Lorna give to Tim so they do have $\frac{1}{2}$ each ?

6. Andy shared these 20 yellow counters with his friend James.



Andy

James

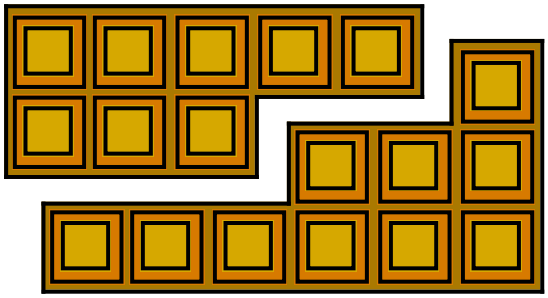


a Did both boys get exactly **half** the counters each ?

b How many **more** did James get than Andy ?

7. Mrs Nehru broke a bar of chocolate into 2 pieces to give to her 2 children, Ajit and Bipin.

Ajit



Bipin

a Did both Ajit and Bipin get **exactly half** each ?

b How many **more** squares did Bipin get than Ajit ?

8. Michael is walking from home to school.

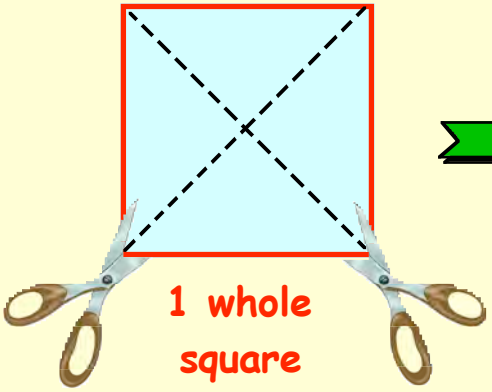
a Is Michael exactly **half** way to school ?

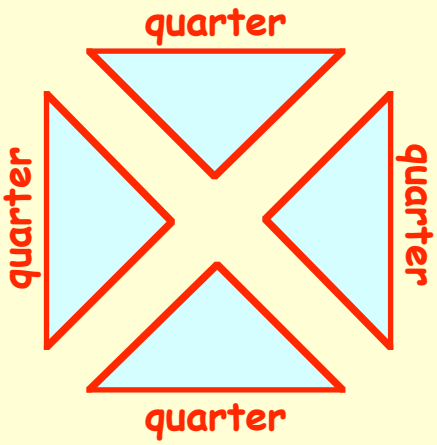
b Is he **more** than or is he **less** than **half** way to school ?

Worksheet 12·1

Quarter of Something

If you cut a shape into **4 equal** bits, each bit is called a **quarter**.

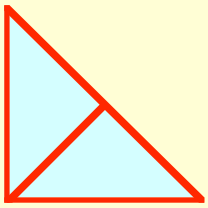




A **quarter** is written like this :- $\frac{1}{4}$ ← one "bit" out of the 4 "bits"

Four **quarters** put back together make a **whole**.

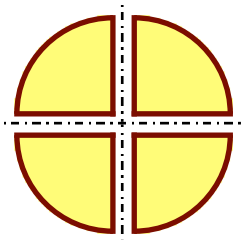
Two **quarters** put together make a **half**. →

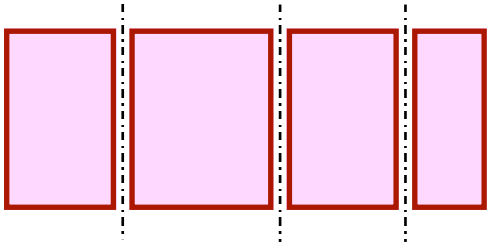


Exercise 2

1. Practice writing the **quarter** symbol (10 times) - $\frac{1}{4}$

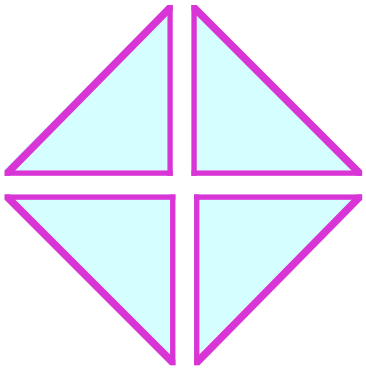
2. Has this circle been cut into **quarters** ?



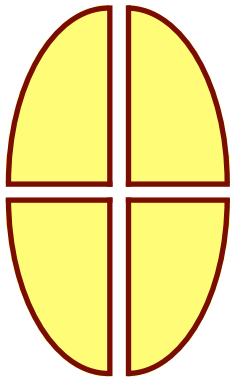
3. 

Has this rectangle been cut into $\frac{1}{4}$'s ?

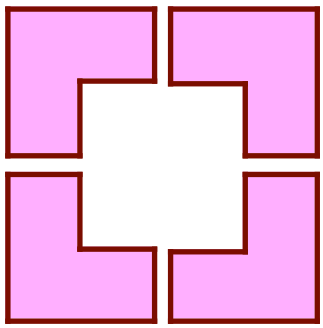
4. Which of these shapes have been cut **exactly** into **quarters** ?



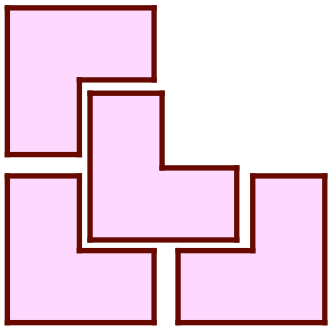
shape A



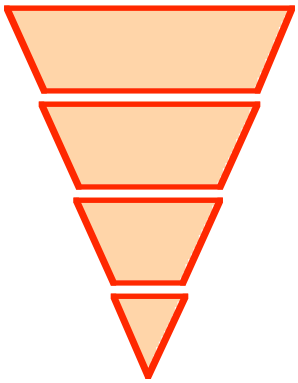
shape B



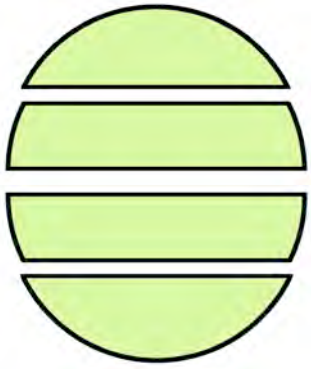
shape C



shape D



shape E

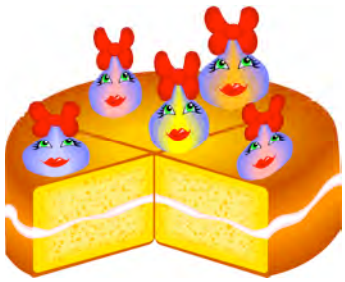


shape F

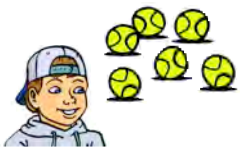
5. Jenny cut her birthday cake into 4 equal slices.

Timmy ate one of the slices.

What **fraction** did Timmy eat ?



6. Bobby, Jane, Nick and Ming share some tennis balls.



Bobby

Jane

Nick

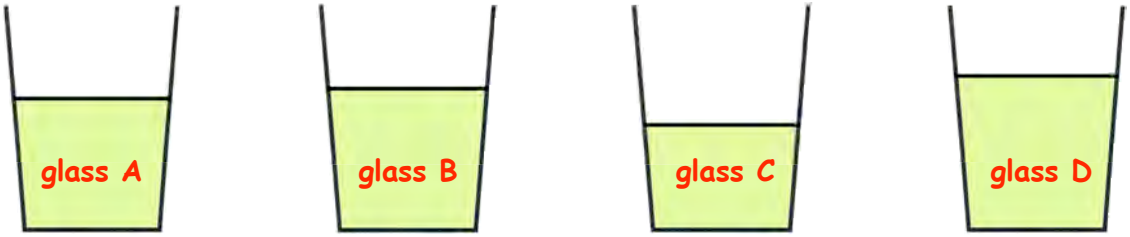
Ming

a Did each of them get a **quarter** of the balls ?

b Who got **most** ?

c Who got **least** ?

7. Mr Doak emptied a carton of limeade into 4 glasses.

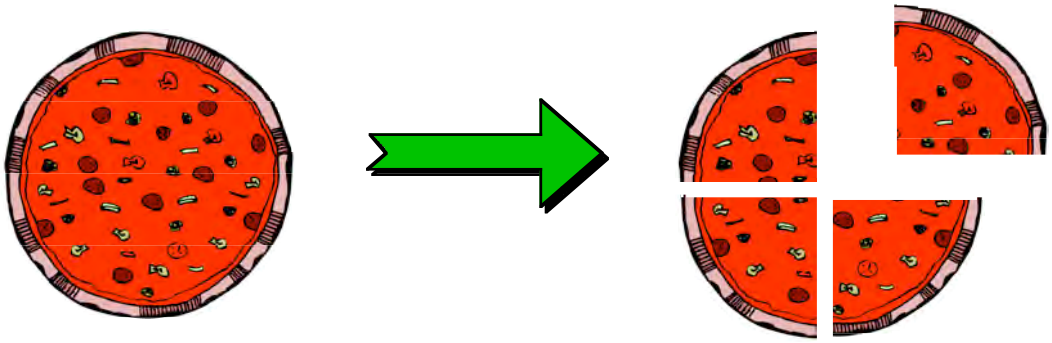


a Did he pour exactly a **quarter** of the limeade into each glass ?

b Which glass held **most** ?

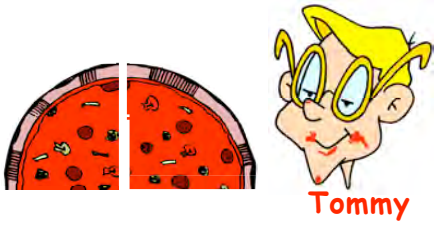
c Which glass held **least** ?

8. Mrs Hutton cut this pizza into **exactly** four equal slices.



a What **fraction** is each slice called ?

Tommy ate **two** of the pizza slices



b What **fraction** had Tommy eaten ?

9. This is a picture of a Battenburg Cake.

A slice has been cut off.

The slice has 4 pieces, two pink and 2 yellow.

a What **fraction** of the slice is 1 pink piece ?

b What fraction of the slice is two pink pieces ?

Worksheet 12·2

Finding a Half of Something

To find a **half** of something is quite simple - you **divide** by **2**.

Example 1 :- $\frac{1}{2}$ of 18p means 18p ÷ 2 =>

$$2\overline{)18} = 9$$

=> **9p.**

Example 2 :- Bill and Ben **share** 14p between them equally.

This means Bill and Ben each get **half** of 14p.

=> $\frac{1}{2}$ of 14p means 14p ÷ 2 =>

$$2\overline{)14} = 7$$

=> **7p.**

Exercise 3

1. Copy this neatly into your jotter :-

$\frac{1}{2}$ of 20p

=> 20p ÷ 2

=> $2\overline{)20} = \ldots$ = ...p.

2. **a** Find **half** of 12p. **b** Find $\frac{1}{2}$ of 16p **c** Find $\frac{1}{2}$ of 28p.

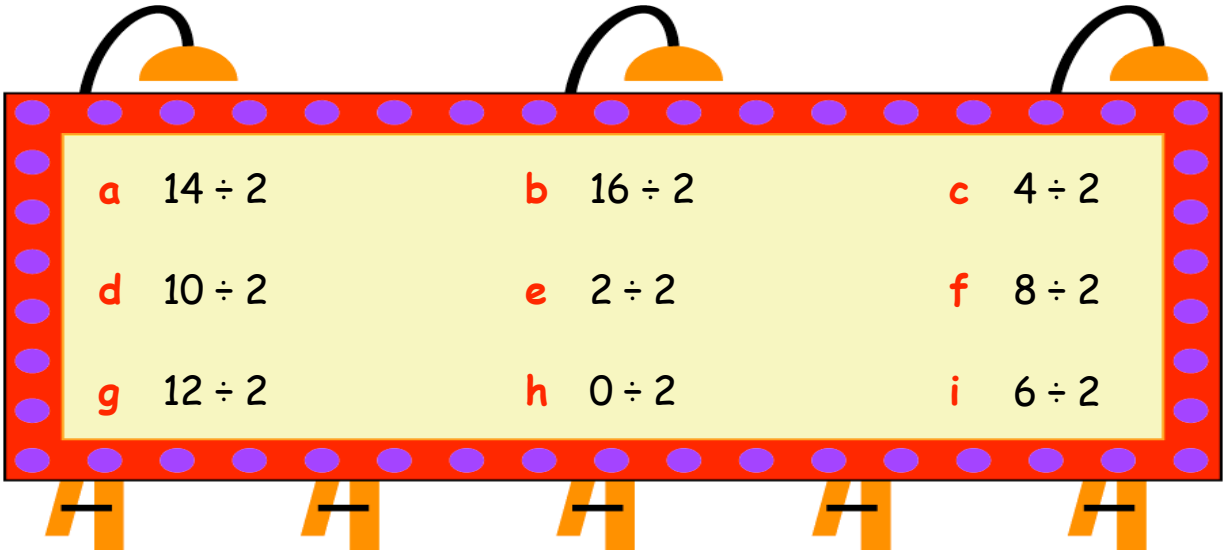
3. Timmy ate **half** of the 8 cakes on the plate.

How many cakes did Timmy eat ?

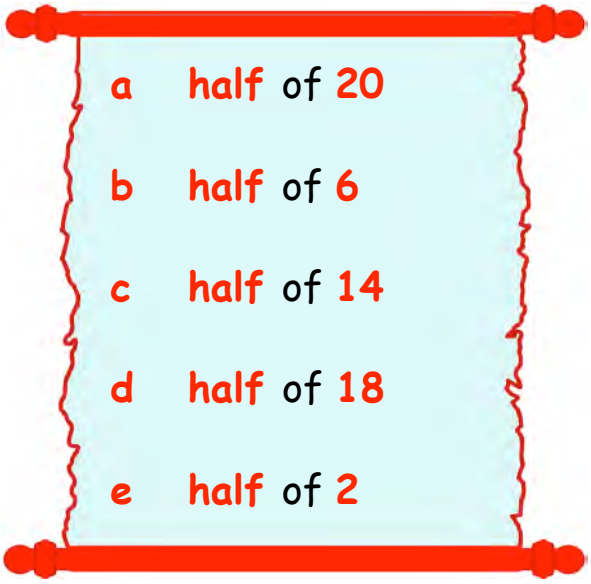
4. **Twelve** people were playing badminton. **Half** of them were men.

How many of the 12 players were men ?

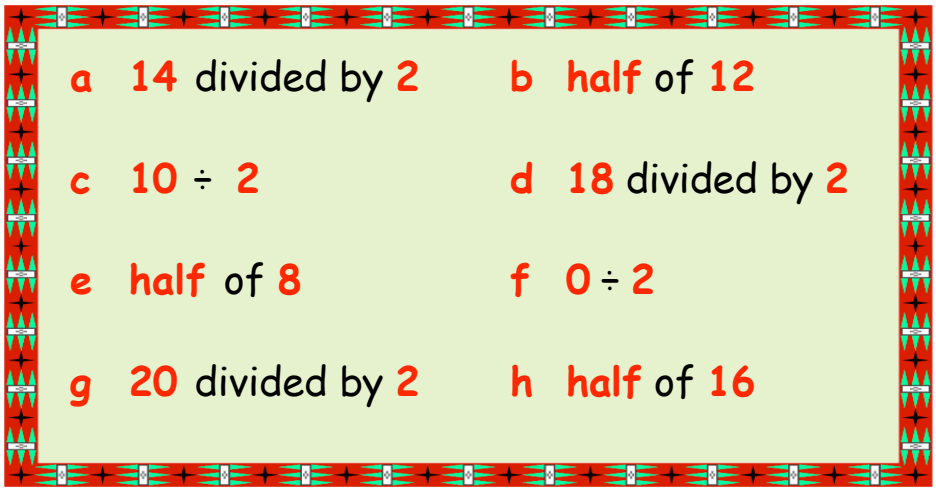
5. Write down the answers to these :-



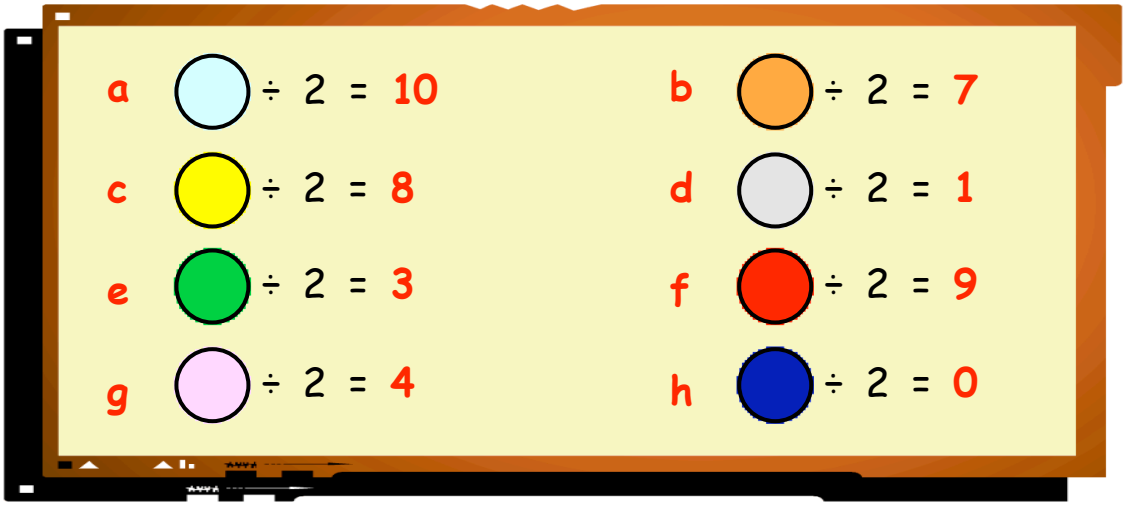
6. Find these :-



7. Find these :-



8. What numbers do the **coloured discs** stand for ? :-



9. a **Share 18p** equally between Ruth and James.

b 

Ted and Jim have **8** golf balls altogether.

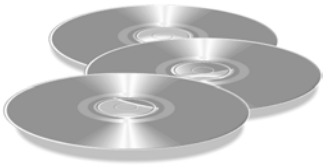
They **share** them equally.

How many golf balls will Ted get ?

c Jill had **half** as many C.D.'s as her friend Mary.

Mary had **16** C.D.'s.

How many C.D.'s must Jill have ?



d 

Barry has **14** comics.

He gives his friend David **half** of them.

How many comics does David get ?

e What is **half** of **half** of **20** ?

Finding a Quarter of Something

To find a **quarter** of something is quite simple - you **divide** by **4**.

Example 1 :- $\frac{1}{4}$ of 12p means 12p ÷ 4 =>

$$4\overline{)12} = 3$$

=> **3p.**

Example 2 :- Wen, Jan, Martha and Marc **share** 24p among themselves equally.

This means each of them gets a **quarter** of 24p.

=> $\frac{1}{4}$ of 24p means 24p ÷ 4 =>

$$4\overline{)24} = 6$$

=> **6p.**

Exercise 4

1. **Copy** this neatly into your jotter :-

$\frac{1}{4}$ of 28p

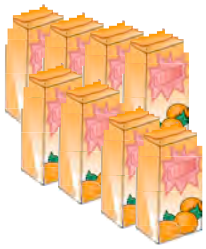
=> 28p ÷ 4

=> $4\overline{)28} = \ldots$ = ...p.

2. **a** Find **quarter** of 16p. **b** Find $\frac{1}{4}$ of 20p **c** Find $\frac{1}{4}$ of 36p

3. Alex drank a **quarter** of the **8** small cartons of juice.

How many cartons did Alex drink ?



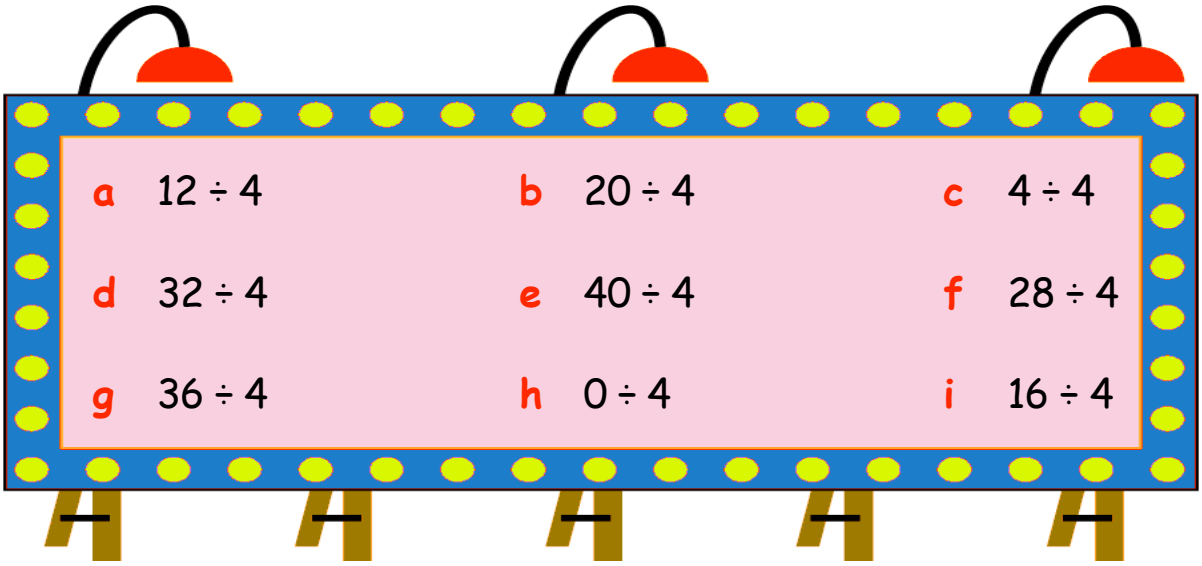
4. 

Twelve penguins were playing on the ice.

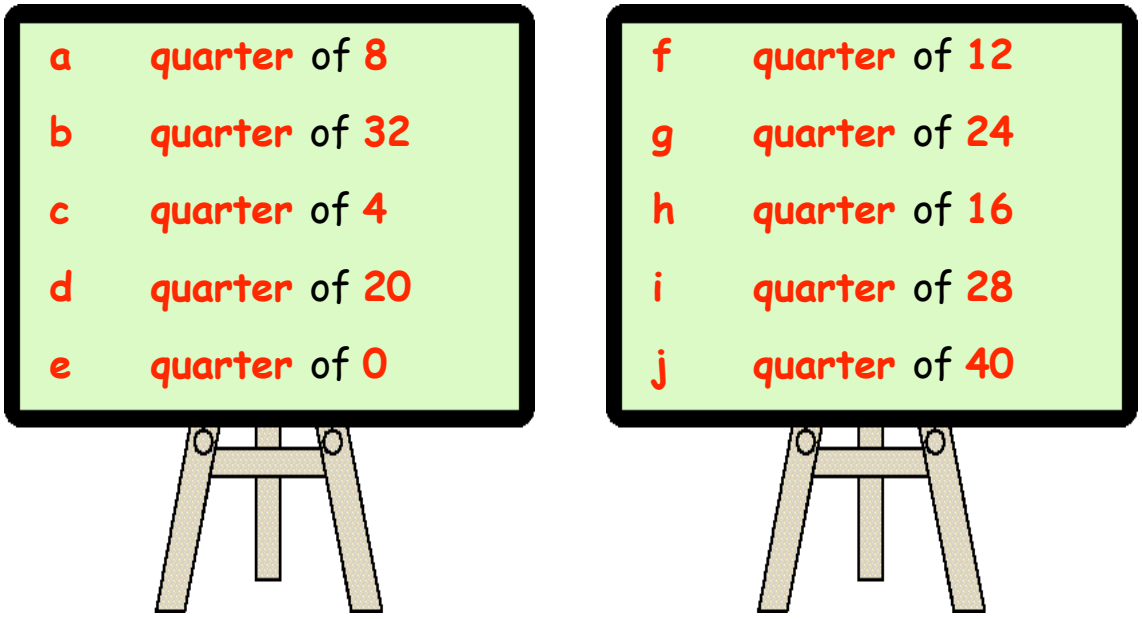
A **quarter** of them were lady penguins.

How many lady penguins were on the ice ?

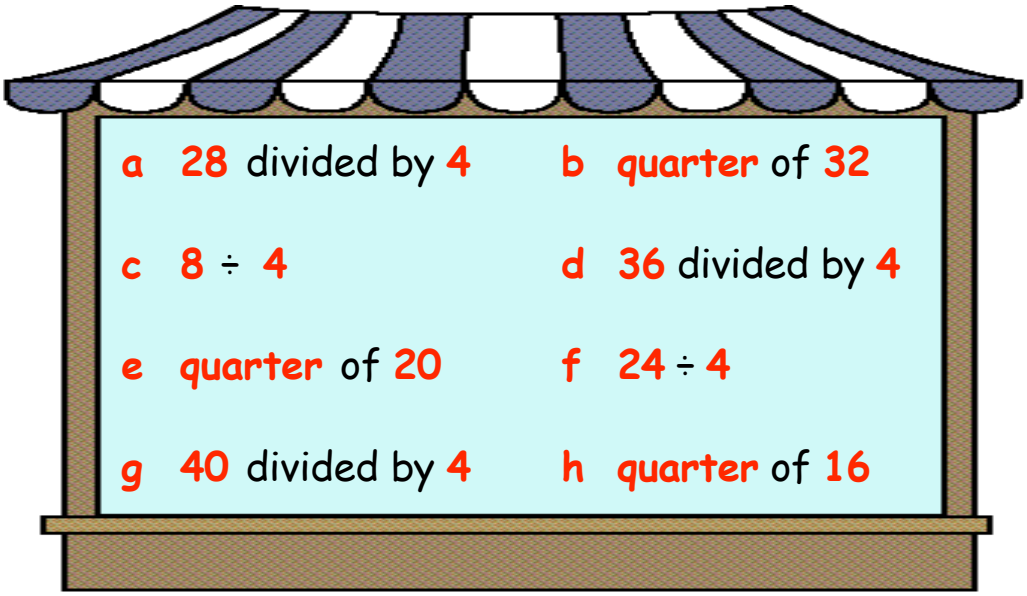
5. Write down the answers to these :-



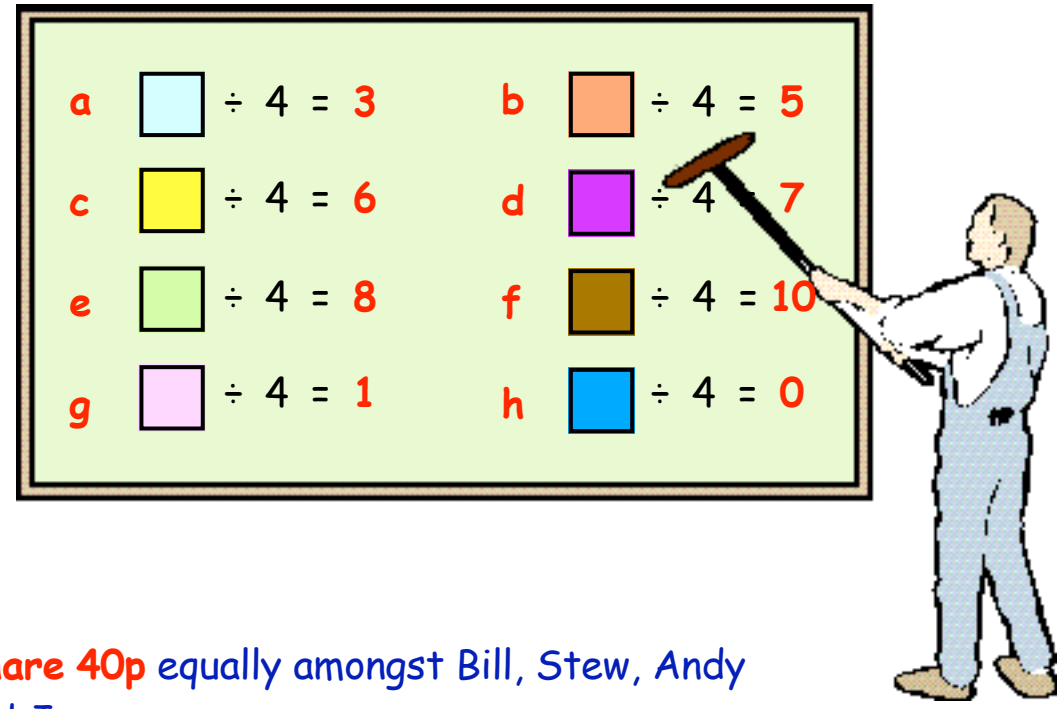
6. Find these :-



7. Find :-



8. What numbers do the **coloured squares** stand for ? :-



9. a **Share 40p** equally amongst Bill, Stew, Andy and James.

b 

Nan, Ruth, Jane and Beth won **£36** altogether in a raffle.

They **share** the money equally.

How much does each girl get ?

c Lucy has a **quarter** of the tops her friend Jill has.

Jill has **24** tops.

How many tops must Lucy have ?


Jill

d 

Sandy has **32** golf balls.

He takes a **quarter** of them to the golf course.

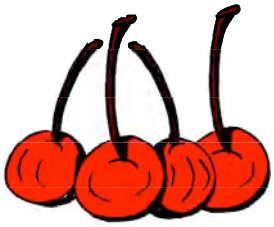
How many golf balls did Sandy take with him ?

e What is a **half** of a **quarter** of **16** ?

Topic in a Nutshell

1. This pizza has been cut into two equal slices.

   What do you call each **slice** ?

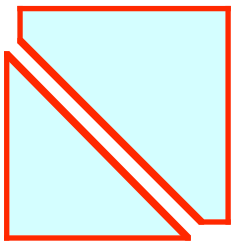
2. 

   Jamie was given 4 cherries.

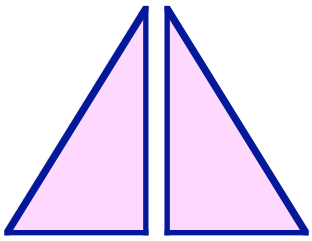
   He ate **1** of the 4 cherries.

   What **fraction** did Jamie eat ?

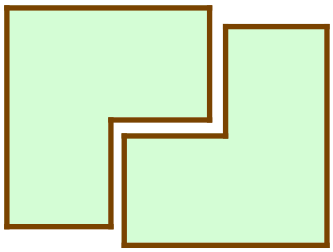
3. Which of these shapes are split into **two equal halves** ?



shape A

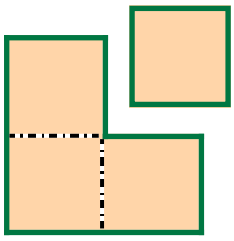


shape B

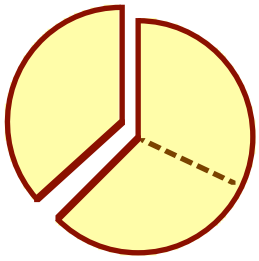


shape C

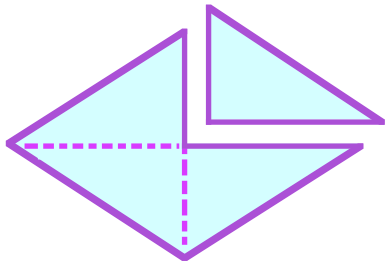
4. In which of these shapes has a **quarter** been removed ?



shape A



shape B



shape C

5. Find :-

a	**half** of 18
b	6 **divided** by 2
c	32 **divided** by 4
d	**half** of 14
e	a **quarter** of 40

f	20 ÷ 2
g	a **quarter** of 36
h	16 ÷ 4
i	20 ÷ 4
j	20 ÷ 2

Chapter 13

Days, Months and Seasons

You will need to learn each list below.

Days of the week	Months of the year	Seasons of the year
Monday	January	Spring
Tuesday	February	Summer
Wednesday	March	Autumn
Thursday	April	Winter
Friday	May	
Saturday	June	
Sunday	July	
	August	
	September	
	October	
	November	
	December	

Exercise 1

Worksheet 13·1

1. a Copy out the days of the week in the correct order.

   b Copy out the months of the year in the correct order.

   c Copy out the seasons of the year in the correct order.

2. On which days of the week do you go to school ?

3. Write down the **missing days** :-

a Monday, Tuesday, Wednesday, ..., Friday.

b Wednesday, Thursday, ..., Saturday, Sunday.

c Friday, ..., Sunday, Monday.

d Tuesday, ..., Thursday, ..., Saturday.

4. Write down the **missing months** :-

a January, February, March, ..., May.

b June, July, ..., September, October.

c April, ..., June, ..., August.

d November, ..., January, ..., March.

5. a In which **season** do the leaves fall off the trees ?

b In which **season** might you throw snowballs ?

6. 

a In what **month** do we have **Christmas** ?

b In what **month** do we have **fireworks** ?

c In what **month** do we have **Halloween** ?

d What **month** is it just now ?

7. a What is the day just after Thursday ?

b What is the day just before Sunday ?

c What is the day just after Saturday ?

d What is the day just before Thursday ?

8. a What is the month just after March ?

b What is the month just before July ?

c What is the month just after September ?

d What is the month just before August ?

e What is the month just before November ?

f What is the month just after May ?

g What is the month just before January ?

9. What day is it :-

a 3 days after Thursday

b 2 days before Saturday

c 5 days after Friday

d 7 days before Monday ?

10. What month is it :-

a 2 months after June

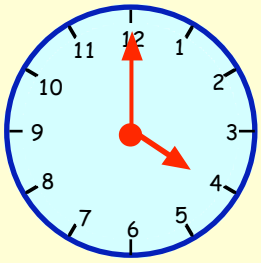
b 3 months before August

c 5 months after July

d 4 months before February ?

Telling the Time

When the **BIG** hand is at **12**, the **SMALL** hand tells you what the **hour** (o'clock) is.



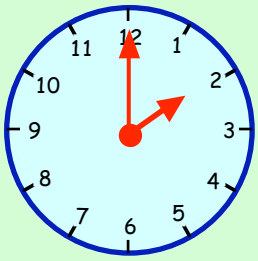
This clock reads

4 o'clock.

Exercise 2

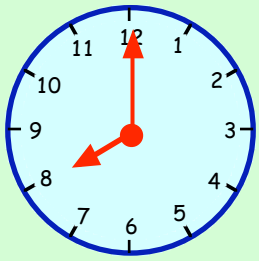
1. Write the time shown on each clock :-

a

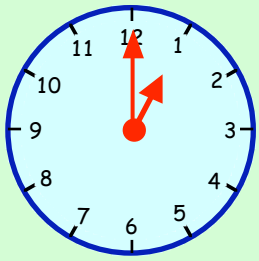


.... o'clock

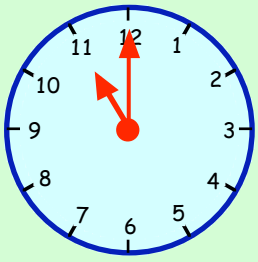
b



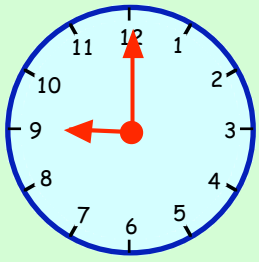
c



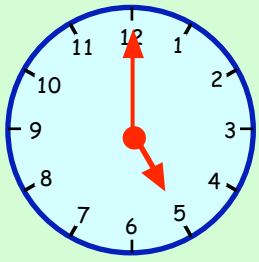
d



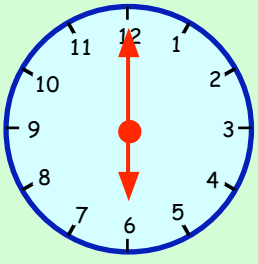
e



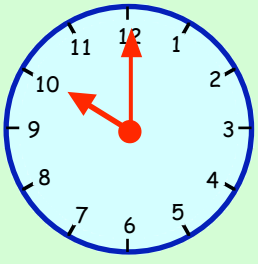
f



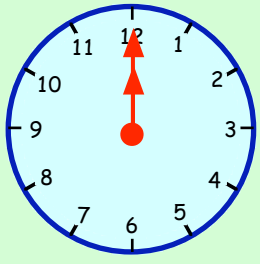
g



h

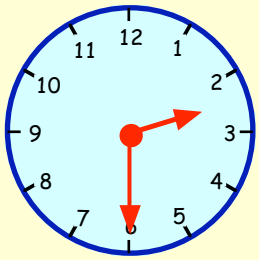


i



When the **BIG** hand is at **6** the time reads as **half past** the hour.

The **SMALL** hand will be just **past** the hour.

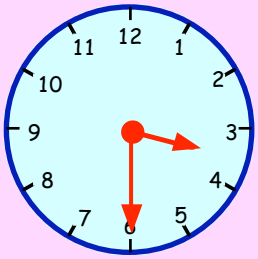


half past

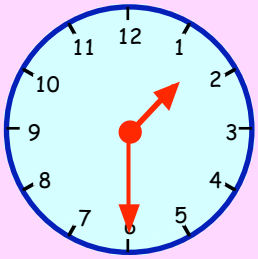
This clock reads
half past 2.

2. Write the time shown on each clock :-

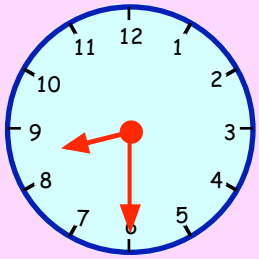
a



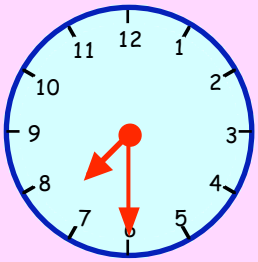
b



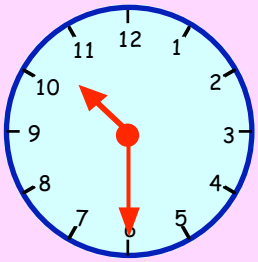
c



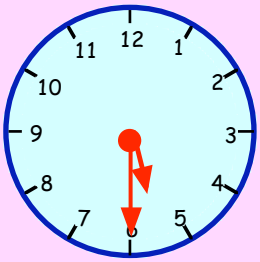
d



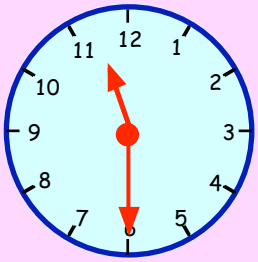
e



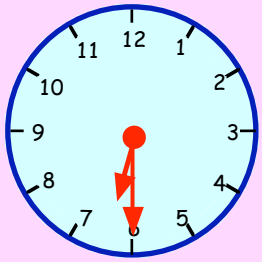
f



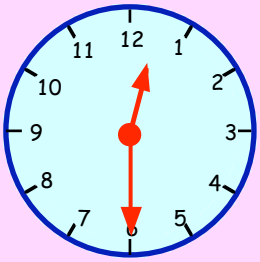
g



h

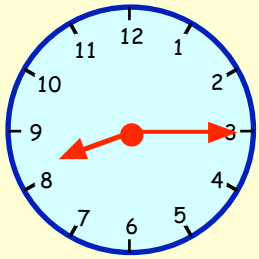


i



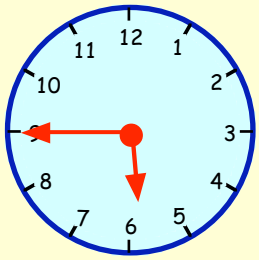
Worksheet 13·2

When the **BIG** hand is at **3** the time reads as **quarter past** the hour.



This clock reads **quarter past 8.**

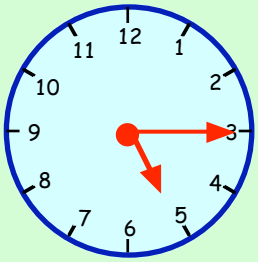
When the **BIG** hand is at **9** the time reads as **quarter to** the hour.



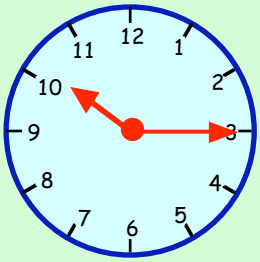
This clock reads **quarter to 6.**

3. Write the time shown on each clock :-

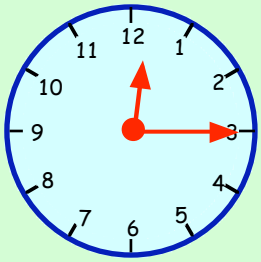
a



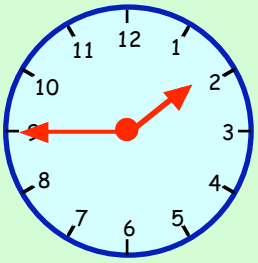
b



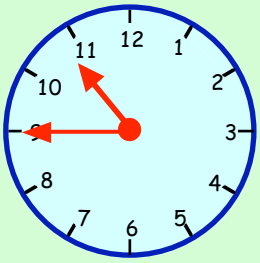
c



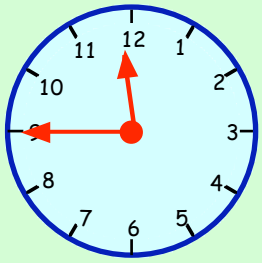
d



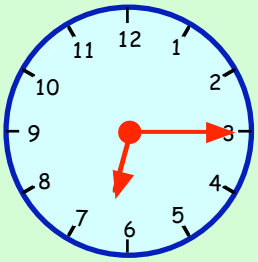
e



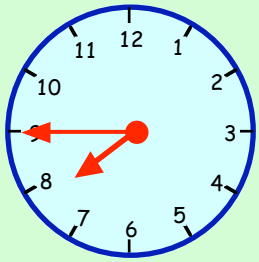
f



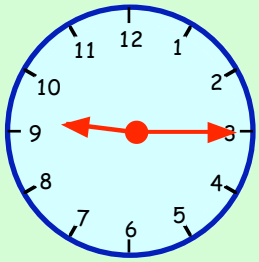
g



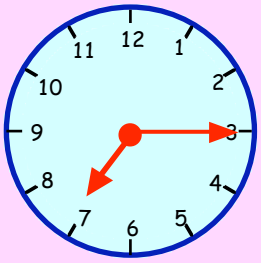
h

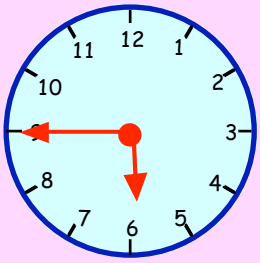


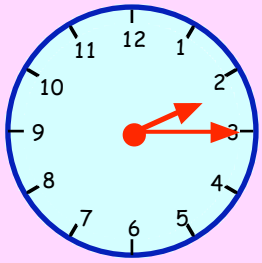
i

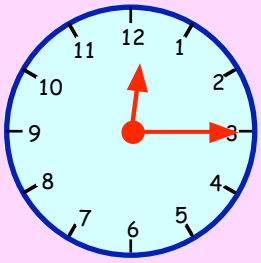


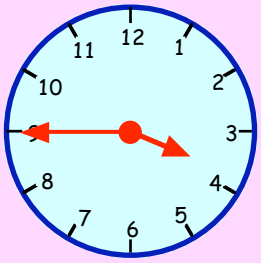
4. Write the time shown on each clock :-

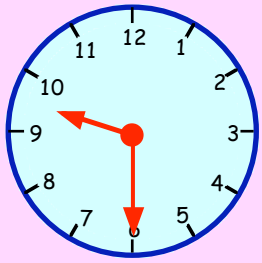
a 

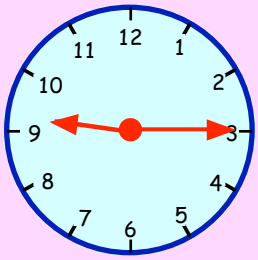
b 

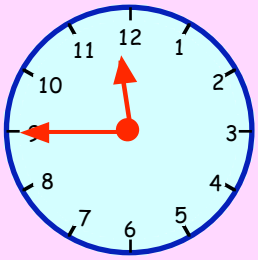
c 

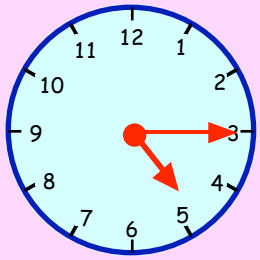
d 

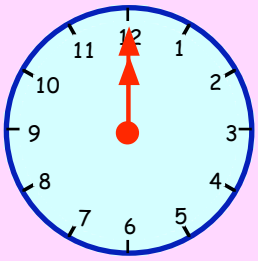
e 

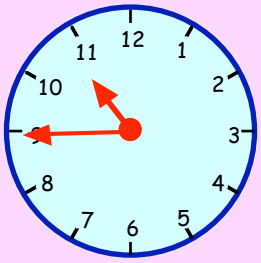
f 

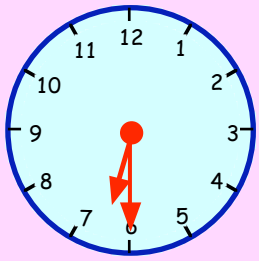
g 

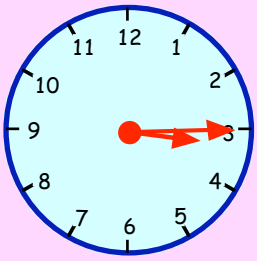
h 

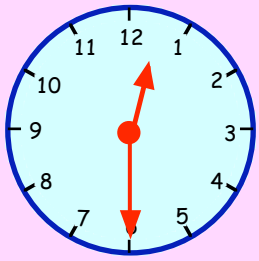
i 

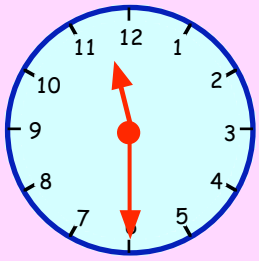
j 

k 

l 

m 

n 

o 

Worksheet 13·3

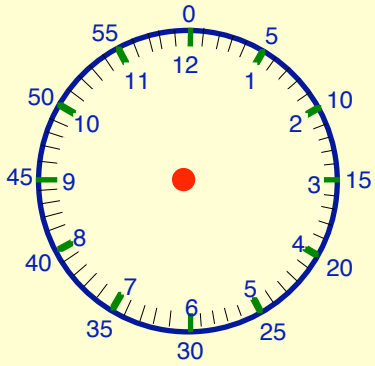
Digital Clocks

There are 60 minutes in an hour.

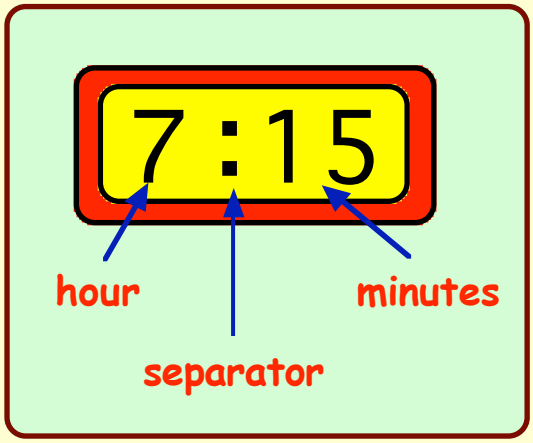
Half Past is 30 minutes after the hour.

Quarter past is 15 minutes after the hour.

Quarter to is 15 minutes before the hour.



Digital clocks show the time using only numbers.



8:00 means 8 o'clock.

2:30 means half past 2.

6:15 means quarter past 6.

3:45 means quarter to 4.

45 minutes past 3 is the same as 15 minutes to 4.

Exercise 3

Worksheet 13·4

1. Write the time shown on each clock using words :-

a) 4:30 (half past ...)

b) 5:15

c) 1:45

d) 8:30

e) 9:15

f) 6:45

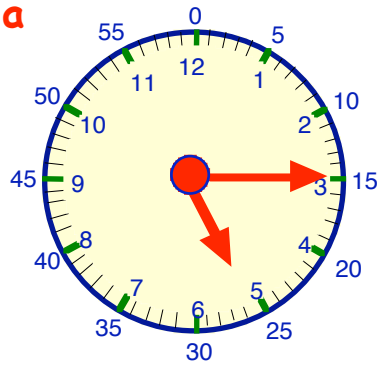
g) 9:30

h) 1:15

i) 5:45

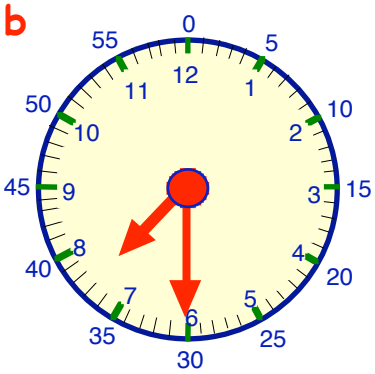
2. For each clock below, **draw** a digital clock to show the **same** time :-

a



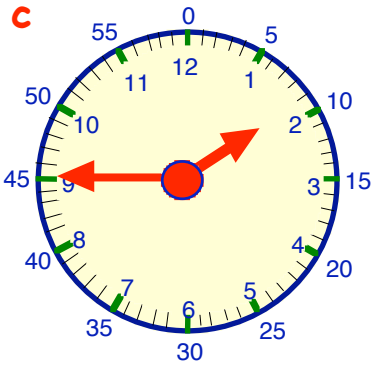
5:15

b



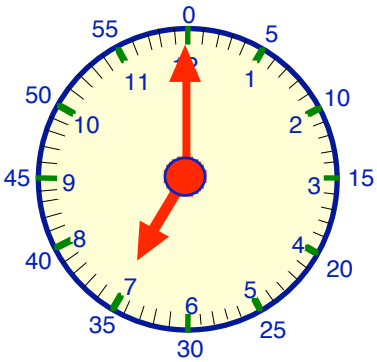
7:....

c

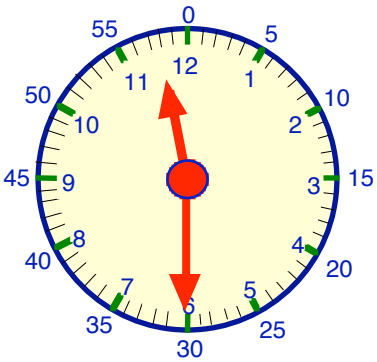


:

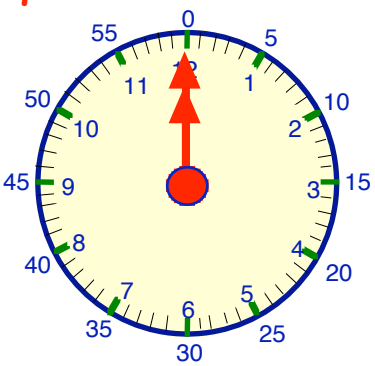
d



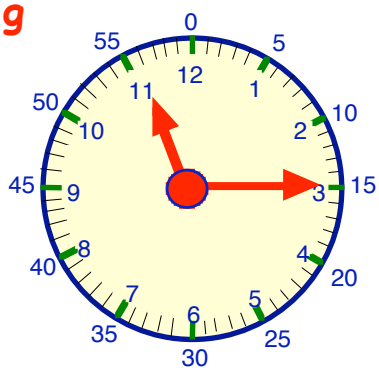
e



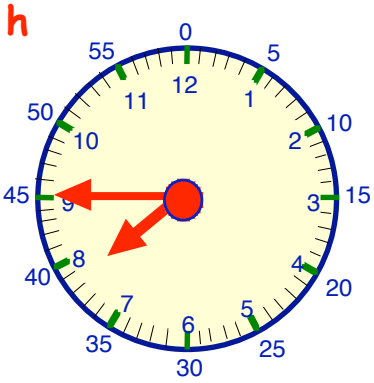
f



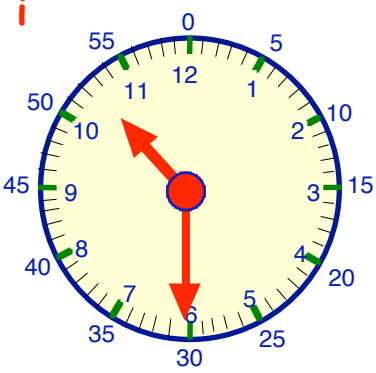
g



h



i



3. Write each time on a digital clock :-

a	half past 9	b	quarter past 1	c	quarter to 9
d	quarter past 3	e	quarter to 12	f	half past 6

Exercise 4

EXTENSION

1. a How many **hours** is it from 2 o'clock to 5 o'clock ?

   b How many **hours** is it from 3 o'clock to 8 o'clock ?

   c How many **hours** is it from 12 o'clock to 3 o'clock ?

   d How many **hours** is it from 5 o'clock to 11 o'clock ?

2. a How many **hours** is it from half past 3 to half past 5 ?

   b How many **hours** is it from half past 6 to half past 11 ?

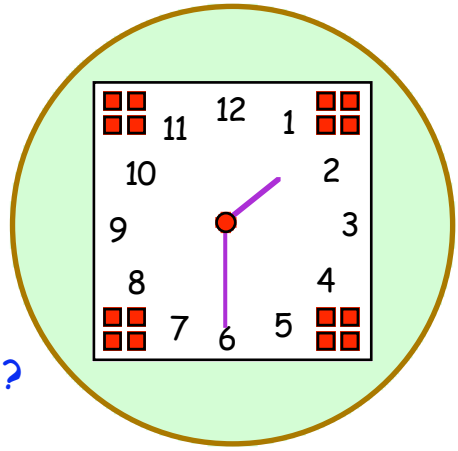
   c How many **hours** is it from quarter past 2 to quarter past 7 ?

   d How many **hours** is it from quarter past 8 to quarter past 12 ?

   e How many **hours** is it from quarter to 5 to quarter to 12 ?

   f How many **hours** is it from quarter to seven to quarter to ten ?

3. The bus station clock is shown.



   a What time does the clock read ?

   b My bus leaves at **quarter to two**.
   How many **minutes** until my bus leaves ?

   c Jack's bus leaves in **45 minutes** time.
   At what time does his bus leave ?

   d The bus to town leaves in **1 hours and 30 minutes** time.
   At what time does the bus to town leave ?

Topic in a Nutshell

1. a Write the **days of the week** in the **correct order**.

   b Write the **months of the year** in the **correct order**.

   c Write the **seasons of the year** in the **correct order**.

2. Write down each **missing** word :-

   a Friday, ..., Sunday, Monday.

   b April, ..., June, ..., August.

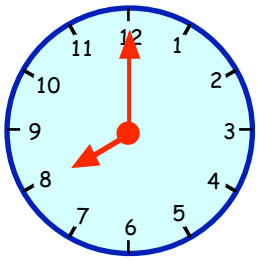
3. a What is the day just **before Sunday** ?

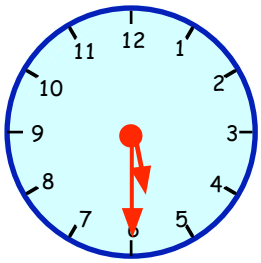
   b What is the **month** just **before July** ?

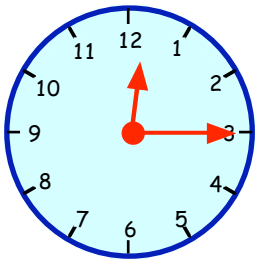
   c What **day** is it **6 days after Friday** ?

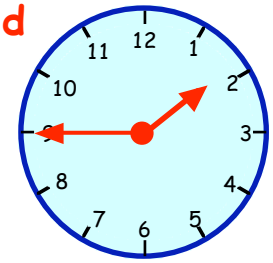
   d What **month** is it **3 months before August** ?

4. Write the time shown on each clock :-

   a 

   b 

   c 

   d 

5. Write the time shown on each clock **using words** :-

   a 

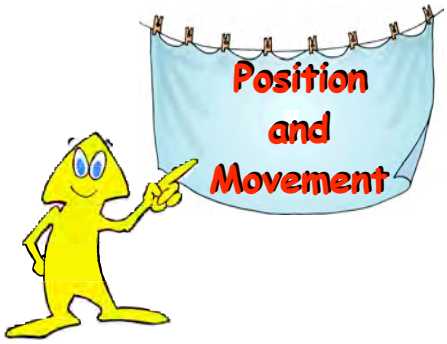
   b 

   c 

6. **Draw** a **digital clock** to show **each** time :-

   a half past 3 b quarter past 4 c quarter to 8.

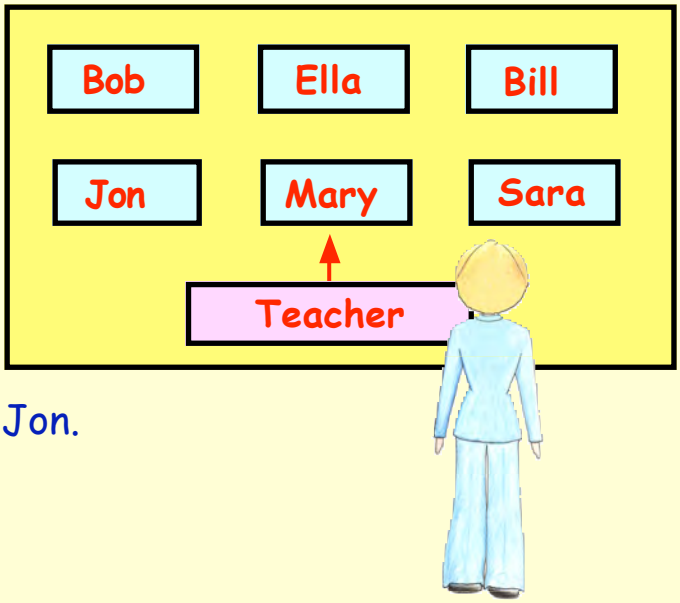
Chapter 14



Position

Look at the seating plan.

From the teacher's desk,



Bob is **behind** Jon.

Mary is **to the right** of Jon.

Mary is **in front** of Ella.

Exercise 1

1. Look at the seating plan **above**.

   The teacher is looking at the class.

   a Who sits **behind Sara** ?

   b Who sits **in front** of **Bob** ?

   c Who sits **to the right** of **Bob** ?

   d Who sits **to the left** of **Mary** ?

   e Who sits **to the right** of **Ella** ?

2. Look at this seating plan.

May	Bob	Teri	Ali
Dan	Jon	Anne	Zak
Alex	Mary	Joe	Bill

Teacher

a Who sits **behind** **Dan** ?

b Who sits **behind** **Joe** ?

c Who sits **in front** of **Zak** ?

d Who sits **in front** of **Ali** ?

e Who sits **to the right** of **Anne** ?

f Who sits **to the right** of **Teri** ?

g Who sits **to the left** of **Bob** ?

h Who sits **to the left** of **Bill** ?

i Who sits **furthest** away from **Alex** ?

3. Prizes are put on 2 shelves.

a What is **below** the **teddy** ?

b What is **above** the **tank** ?

c What is **to the right** of the **doll** ?

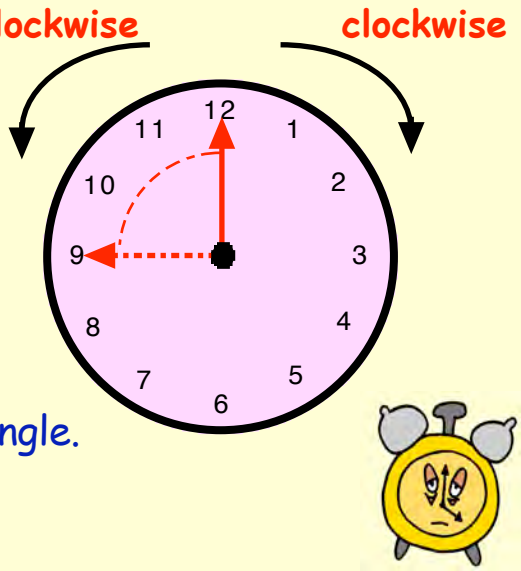
d What is **to the left** of the **plane** ?

Worksheet 14·1

Turning through a Right Angle

The hands of a clock move in a **clockwise** direction.

Anticlockwise is the opposite direction.



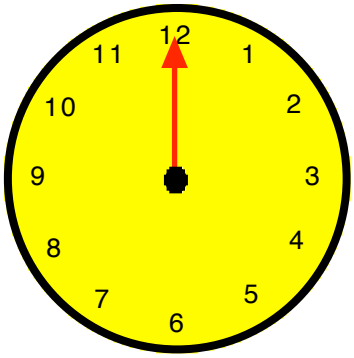
Example

Start at **12**.

Turn **anticlockwise** through one right angle.

You finish at **9**.

Exercise 2



1. Start at **12**. Turn **clockwise** one right angle.
   Where do you finish ?

2. Start at **3**. Turn **clockwise** one right angle.
   Where do you finish ?

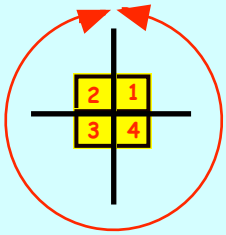
3. Start at **3**. Turn **anticlockwise** one right angle.
   Where do you finish ?

4. Start at **6**. Turn **anticlockwise two** right angles.
   Where do you finish ?

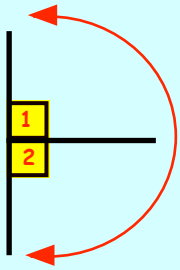
5. Start at **5**. Turn **clockwise** one right angle.
   Where do you finish ?

Quarter Turn and Half Turn

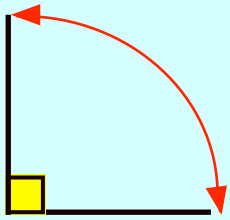
A full turn
is the same as
4 right angles.



A half turn
is the same as
2 right angles.

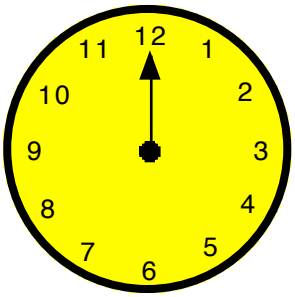


A quarter turn
is the same as
one right angle.



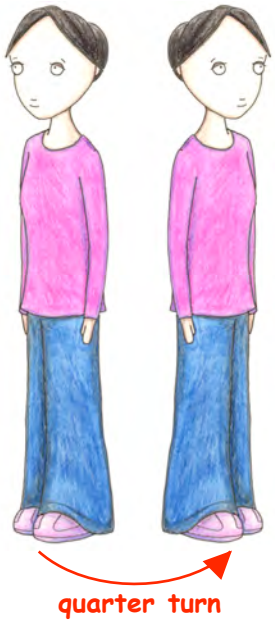
Exercise 3

1. Start at **12**. Make a **full turn clockwise**.
   Where do you finish ?



2. Start at **3**. Make a **half turn clockwise**.
   Where do you finish ?

3. Start at **3**. Make a **quarter turn anticlockwise**.
   Where do you finish ?



4. Start at **6**. Make a **quarter turn anticlockwise**.
   Where do you finish ?

5. Start at **5**. Make a **half turn clockwise**.
   Where do you finish ?

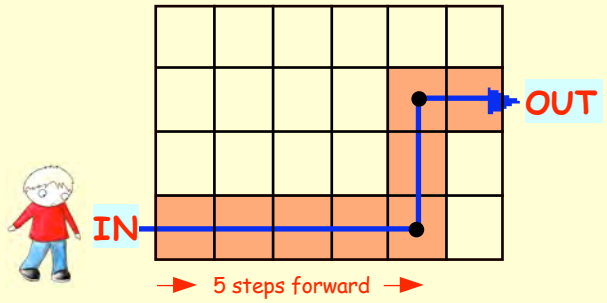
6. Start at **5**. Make a **quarter turn anticlockwise**.
   Where do you finish ?

Describing a Journey

Example

Ben takes a path through the maze.

He follows these instructions to get through the maze.



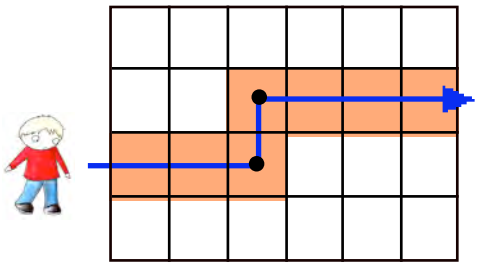
Take 5 steps forward
Turn left
Take 2 steps forward
Turn right
Take 2 steps forward

Exercise 4

1. Write directions to show this path.

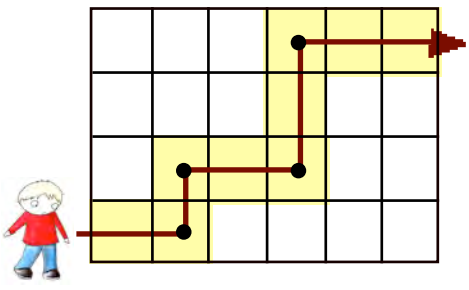
Copy this and **complete** :-

Take ... steps forward
Turn .....
Take ... steps forward
Turn .....
Take ... steps forward

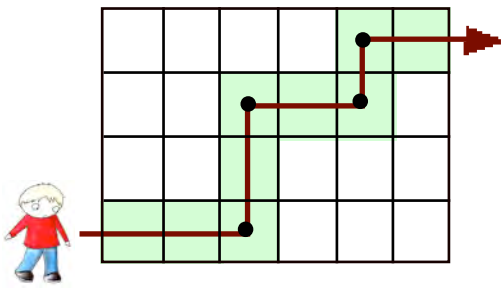


2. Write directions to get Ben through each maze.

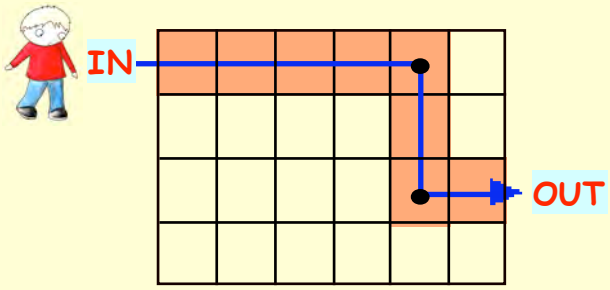
a



b



Harder Journeys

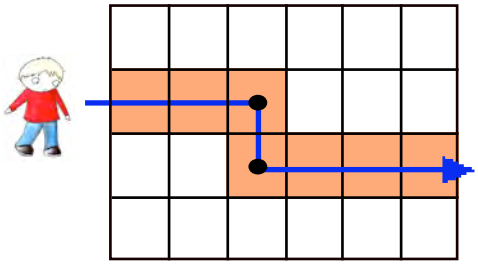


Take 5 steps forward
Turn right
Take 2 steps forward

(Ben is facing down the page)

Turn left
Take 2 steps forward

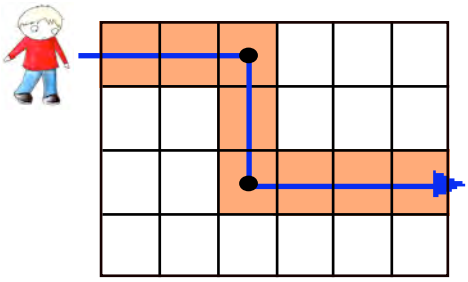
3. Write directions to show this path.
Copy and **complete** :-



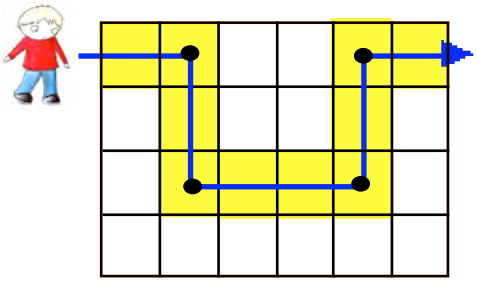
Take ... steps forward
Turn .....
Take ... steps forward
(Ben is facing down the page)
Turn ....
Take ... steps forward

4. Write directions for Ben to pass through each maze below.

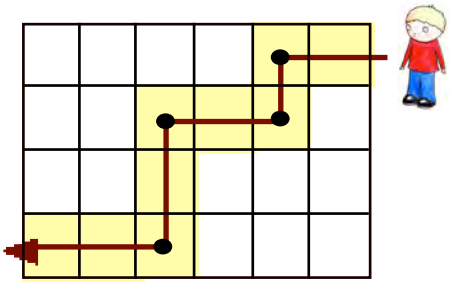
a



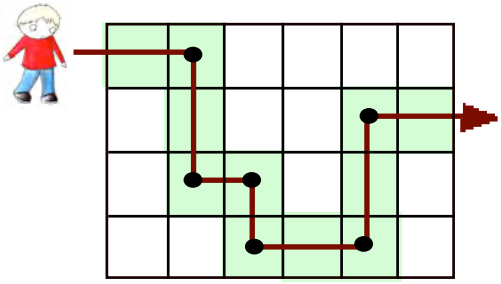
b



c



d



Worksheet 14·2

Compass Points

A compass gives **directions**.

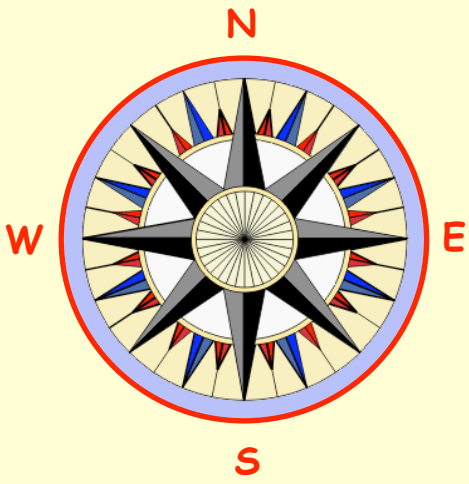
The four main points of the compass are

North (N),

South (S),

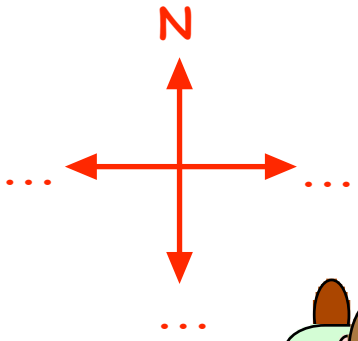
East (E),

West (W).



Exercise 5

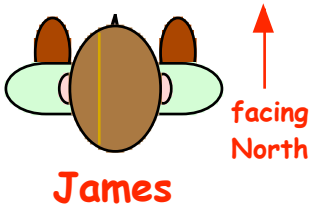
1. **Copy** and **complete** the diagram.



2. James is facing **North**.

   He turns **clockwise one right angle**.

   In which direction is James now facing ?



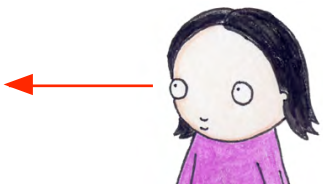
3. Ben is also facing **North**. He makes a **half turn clockwise**.

   In which direction is Ben now facing ?

4. Lucy is facing **West**.

   She makes a **quarter turn anticlockwise**.

   In which direction is Lucy now facing ?

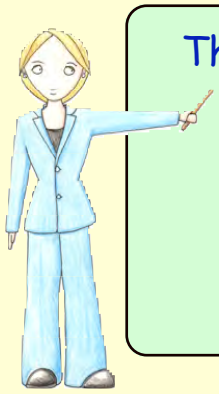


5. Jane is facing **East**.

   She turns **anticlockwise three right angles**.

   In which direction is Jane now facing ?

Coordinate Grids



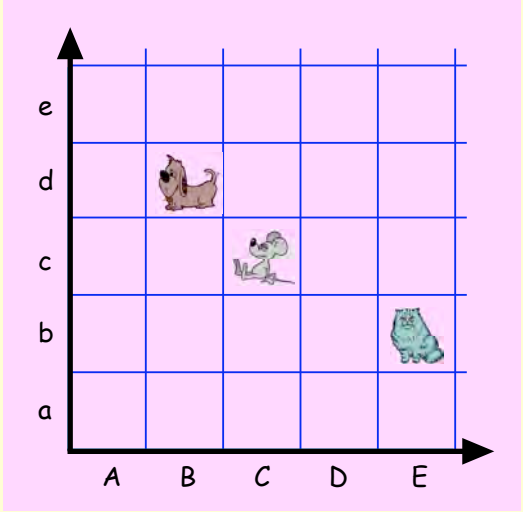
The position of an object can be described by using a **COORDINATE GRID**.

The position can be given by showing which **square** the object is sitting in.

The position of the **dog** is **Bd**.

The **cat** is at **Eb**.

The **mouse** is at **Cc**.



Always go **along** first, then **up**.

Exercise 6

1. Look at this grid.

   Write the position of :-

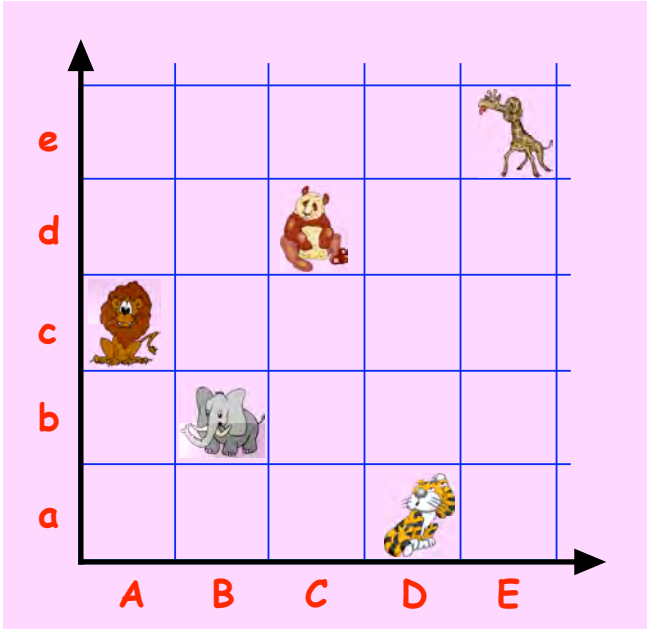
   a the **lion**.

   b the **panda**.

   c the **tiger**.

   d the **giraffe**.

   e the **elephant**.



2. Look at the grid shown.

Write the position of the :-

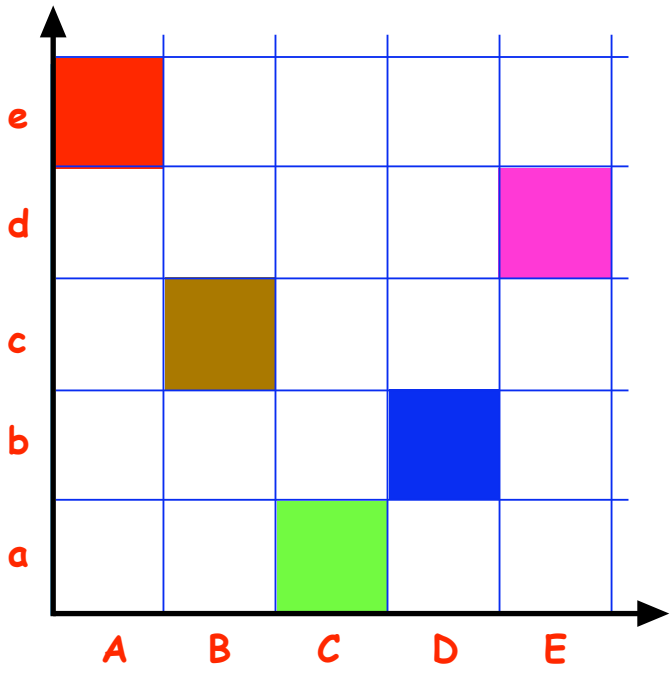
a **blue** square

b **green** square

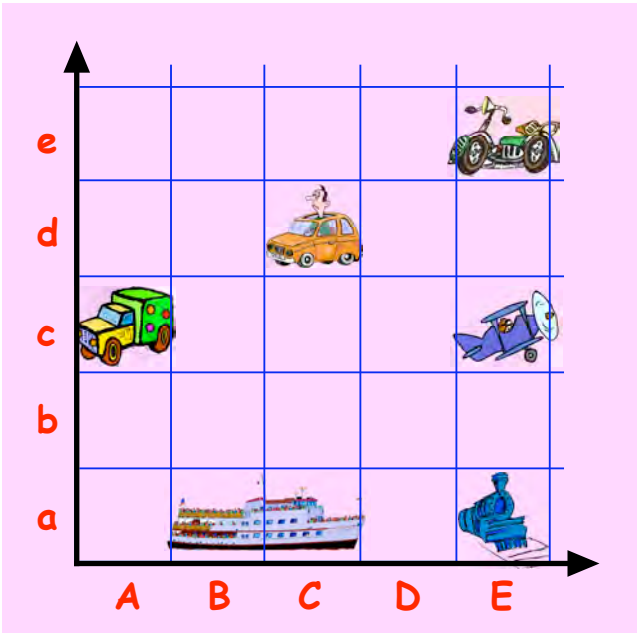
c **red** square

d **brown** square

e **pink** square.



3.



a What is at position **Cd** ?

b What is at **Ac** ?

c What is at **Ec** ?

d What is at **Ba** and **Ca** ?

e What is at **Ea** ?

f What is at **Ee** ?

The empty boxes in row **a** are **Aa** and **Da**.

g Write the positions of all the empty boxes in row **c**.

4. This grid has letters and numbers.

Can you see that the **blue** square is on **C2** ?

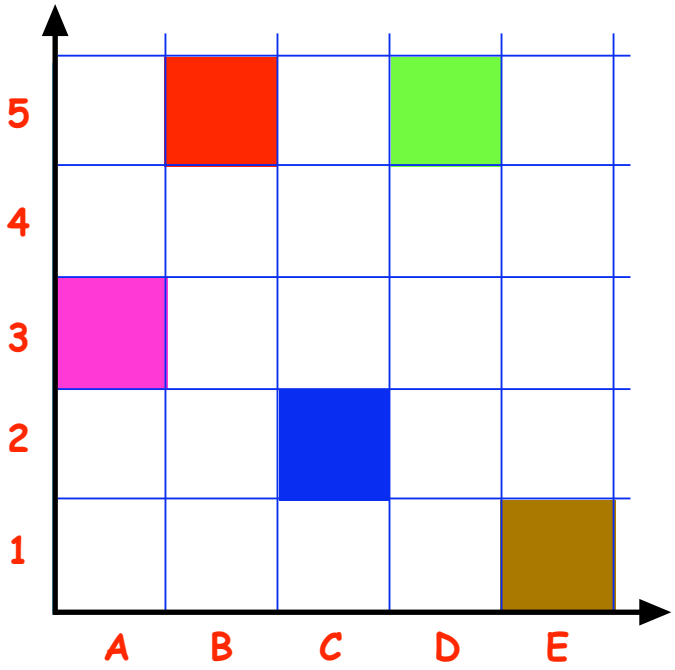
Write the position of the :-

a the **red** square.

b the **pink** square.

c the **green** square.

d the **brown** square.



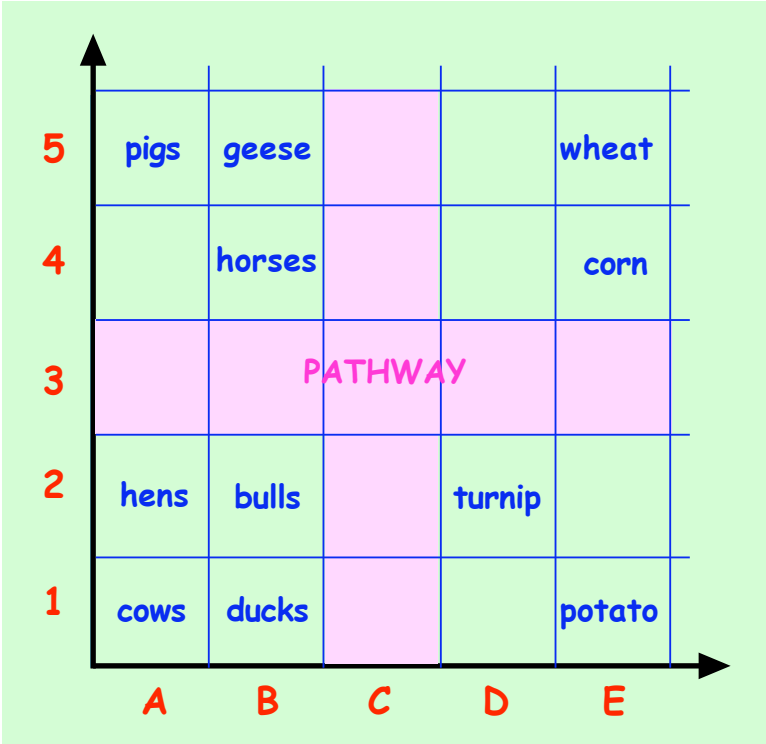
5. This grid shows fields on a farm where the farmer keeps his crops and his animals.

a Write the position of **each field**.

(Example : ducks - B1)

b Write the positions of each pink square of the **pathway**.

c Write the positions of the **empty fields**.



Use **Worksheet 14·3** to help answer **questions 6 to 8.**

6. **Look** at **grid 1** on the worksheet.

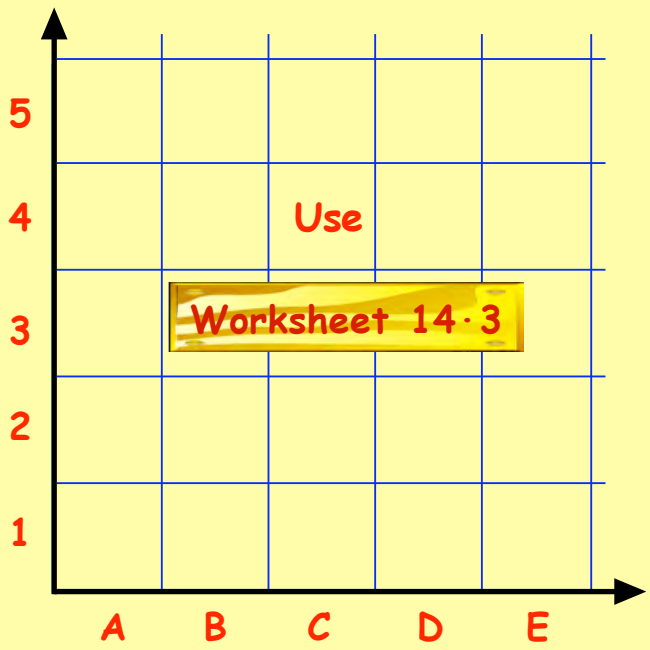
a Colour **B2 red**

b Colour these squares **blue**

A2, D5, E1.

c Colour **C1**, **C4** and **E3 brown.**

d Colour **A4** and **B5 pink.**



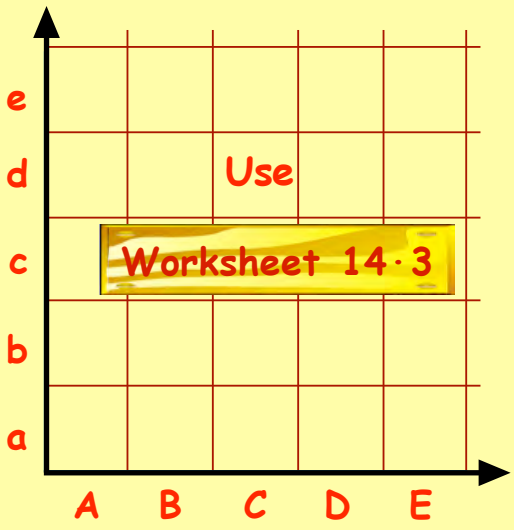
7. **Look** at **grid 2** on the worksheet.

a Colour these squares **blue** :-

Bb, De, Ea and **Ae.**

b Colour these squares **red** :-

Ce, Cc, Aa and **Ec.**



8. **Look** at **grid 3** on the worksheet.

a This time, make a pattern of your own, using colours.

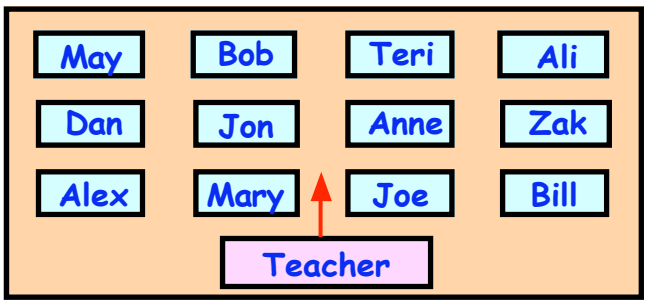
b For each square you coloured in, write down its colour and its grid position.

(Example : red - B2).

Worksheet 14·4

Topic in a Nutshell

1. The teacher is standing at the front of the class. :-



   a Who sits **behind** **Zak** ?

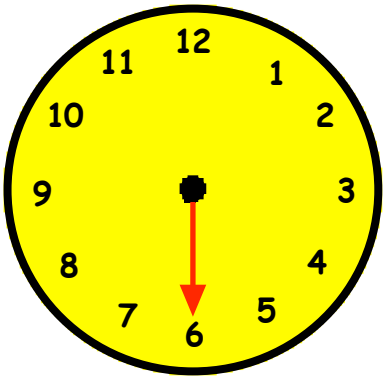
   b Who sits **in front** of **Dan** ?

   c Who sits **to the right** of **Jon** ?

   d Who sits **to the left** of **Teri** ?

   e Who sits **furthest** away from **Bill** ?

2. Look at this clock face.



   a Start at **6**. Turn **clockwise** one right angle.

   Where do you finish ?

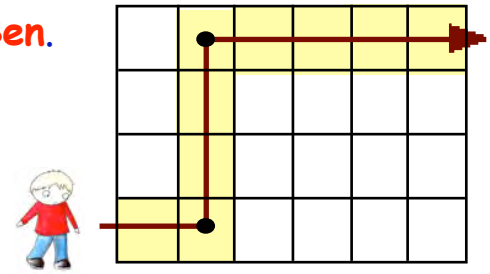
   b This time, start with the hand pointing to **3**.

   Make a quarter turn **anticlockwise**.

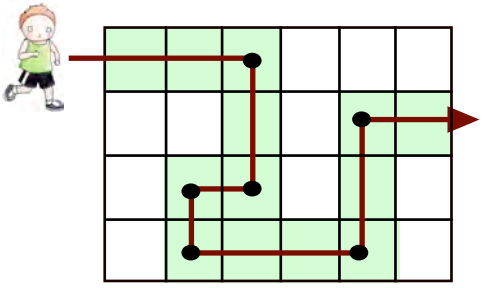
   Where do you finish ?

3. Describe the journey through the maze by **Ben**.

   Start with :- **" Forward 2 squares, turn ....."**

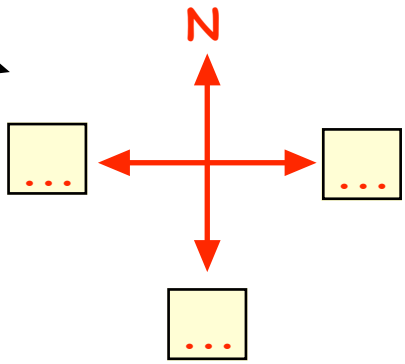


4.



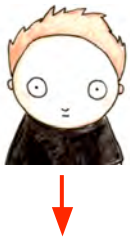
Describe **Nick's** journey.

5. a **Copy** and **complete** the diagram.



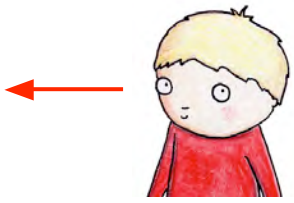
b Nick is facing **South**.

He turns **clockwise**
one right angle.



In which direction is Nick now facing ?

c



Ben is facing **West**.

He makes a **half turn anti-clockwise**.

Which way is Ben now facing ?

6. Look at the grid shown.

Write the position of the :-

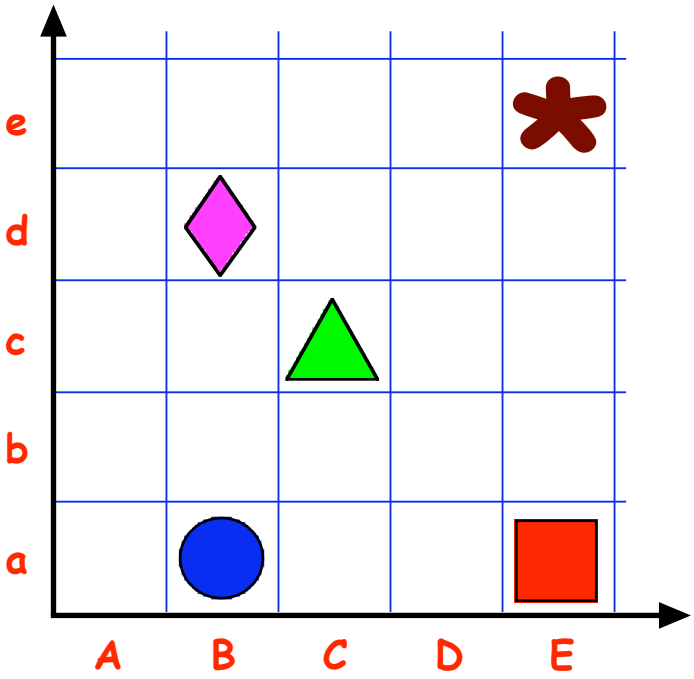
a **blue circle**

b **green triangle**

c **red square**

d **brown star**

e **pink diamond**.



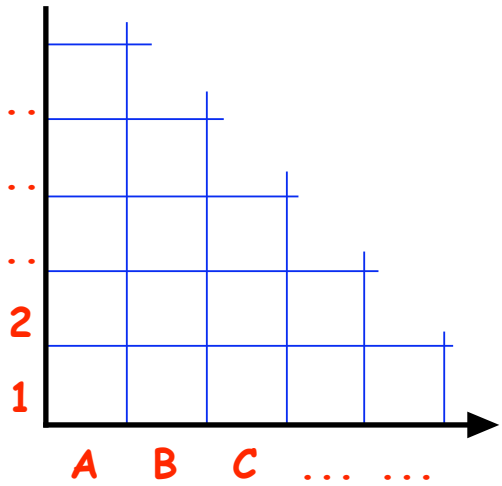
7. Use a ruler to draw your own grid.

Go **along** from **A** to **F**.

Go **up** from **1** to **6**.

Colour these squares :-

C3 blue, **E6 red**, **A2 pink**, **D4 green**.



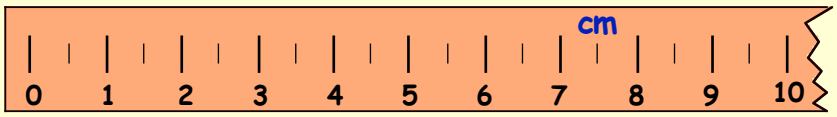
Chapter 15

Calculators should NOT be used.

Measuring

When measuring a length you can use many different devices.

A **ruler** measures small lengths in **centimetres**.



*centimetres can be written as **cm***

A **tape measure** measures larger lengths in **metres**.

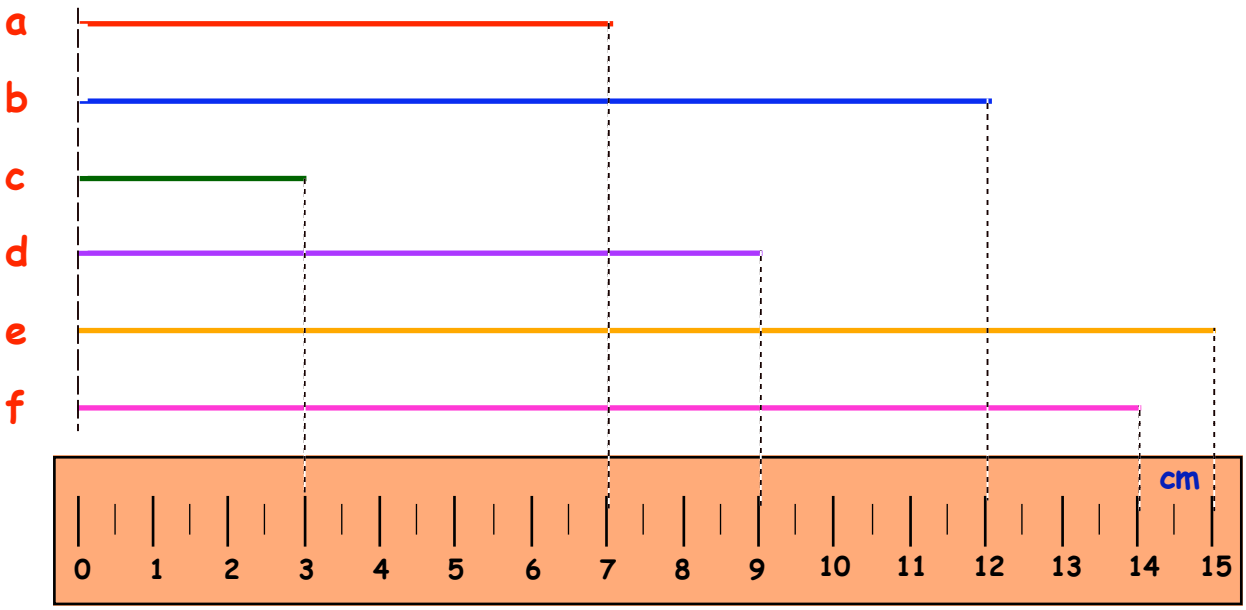
*metres are written as **m***

Exercise 1

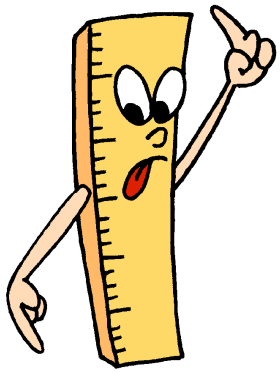
1. What would you use, (a ruler or a tape measure), to measure :-

   a the length of a pencil
   b the length of a plank of wood
   c the height of a door
   d the width of this page
   e the length of your bedroom
   f the length of your finger ?

2. Write down the lengths of these lines in centimetres :-



3. Use **your own ruler** to measure these lines and write down your answers.



a

b

c

d

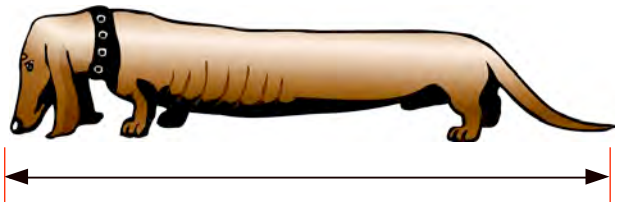
e

f

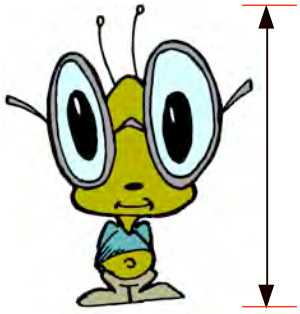
g

4. Measure and write down the size :-

a

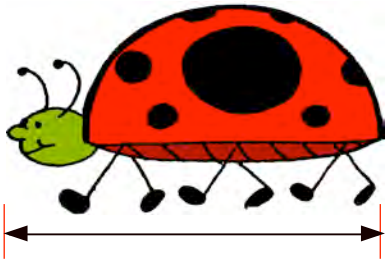


b

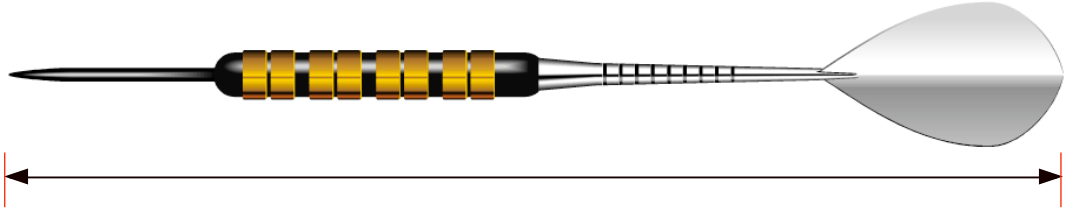


c

d



e

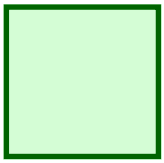


Worksheet 15·1

5. Draw and label lines which measure :-

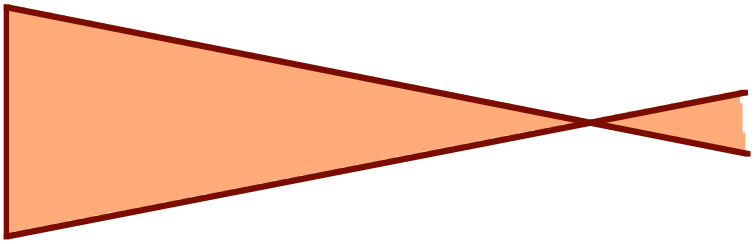
a 3 cm	**b** 9 cm	**c** 14 cm	**d** 1 cm
e 16 cm	**f** 7 cm	**g** 4 cm	**h** 11 cm.

6. Measure the **length** of each line in these shapes and write down your answers.

a 

b 

c 

d 

7. a Use your ruler to draw a **rectangle** **5 cm** long and **3 cm** wide.

b Now draw a rectangle **8 cm** long and **6 cm** wide.

c Draw a **square** with all 4 of its sides **7 cm** long.

8. a Which insect is **smaller** (1 or 2) ?  1  2

b Which tyres are **narrower** ?


1

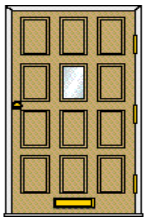

2

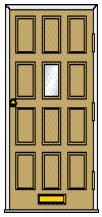
c Which plant is **taller** ?


1

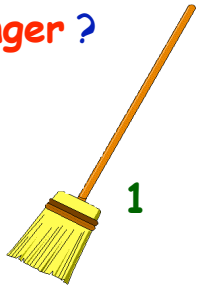

2

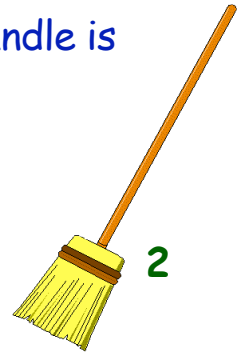
d Which door is **wider** ?


1


2

e Which brush handle is **longer** ?


1

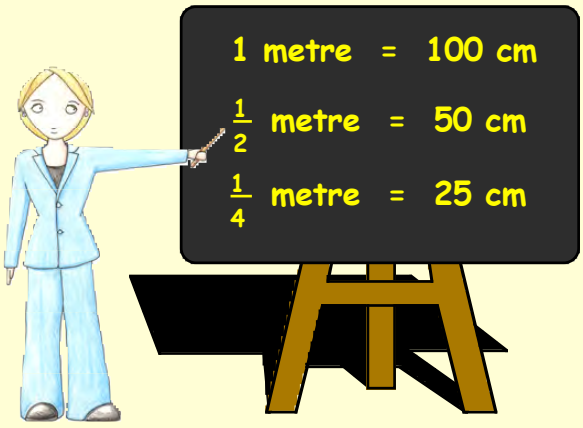

2

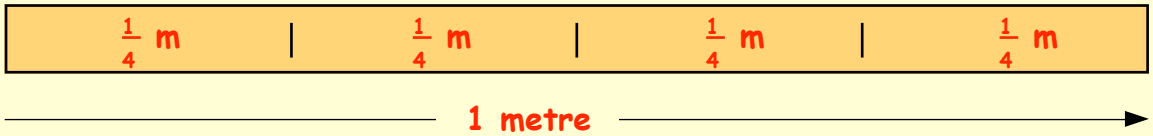
Measuring in Metres

Sometimes, for longer lengths, it is better to measure in **metres** (**m**).

For this exercise, you will need :-

- a **1 metre** stick or
- a piece of card **1 metre** long marked off in $\frac{1}{4}$ **metres**.

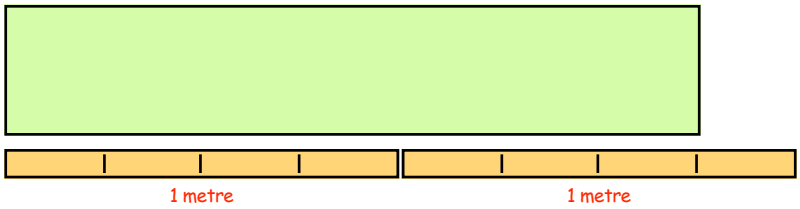




Exercise 2

Ask your teacher for a 1 metre strip, marked off in $\frac{1}{4}$ metres.

1. This picture shows a table which is **one** and **three** $\frac{1}{4}$**'s** metres long.



Use your 1 metre strip to measure and then write down :-

a the **width** of the teacher's board.

b the **width** of your desk.

c the **width** of your classroom.

d the **height** of the door.

e the **length** of the classroom.

2. Ask your teacher if you can measure other objects in the room or in other places.

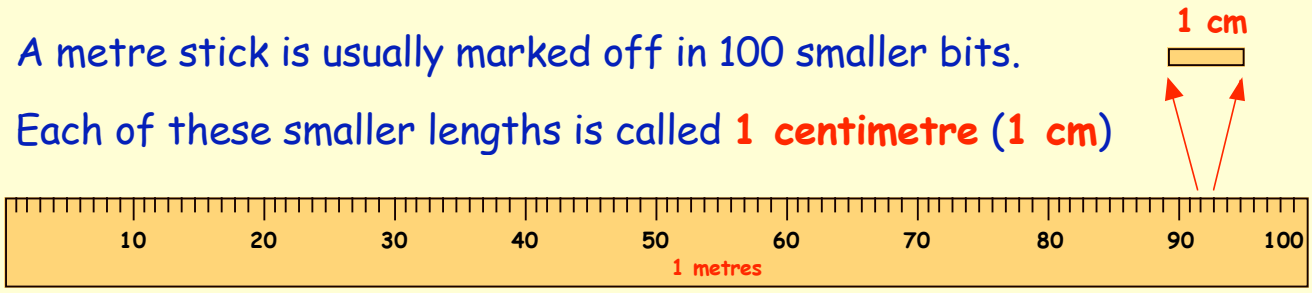
3. You might like to measure some objects (your bedroom, the length of your bath....) at home using a metre measure.

Metres and Centimetres

1 Metre = 100 centimetres

A metre stick is usually marked off in 100 smaller bits.

Each of these smaller lengths is called **1 centimetre (1 cm)**



Examples Since **1 metre = 100 centimetres**

metre	= m
centimetre	= cm

=> **2 metres = 200 cm**

=> **7 metres = 700 cm**

=> **4 m 30 cm = (400 + 30) cm = 430 cm**

=> **9 m 65 cm = (900 + 65) cm = 965 cm**

Exercise 3

1. Remember :- **1 metre = 100 cm.** How many **cm** in :-

a 1 m	b 5 m	c 8 m	d 3 m
e 9 m	f 7 m	g 6 m	h 10 m
i 4 m	j 11 m	k 12 m	l 15 m ?

2. **100 cm = 1 metre.** How many **metres** are in :-

a 400 cm	b 800 cm	c 200 cm	d 500 cm
e 700 cm	f 1000 cm	g 300 cm	h 900 cm ?

3. Copy and complete :-

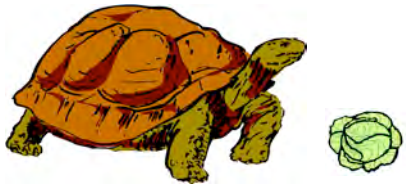
a	1 metre 20 centimetres	=	1 m 20 cm	=	..... cm
b	2 metres 50 centimetres	=	2 m ..... cm	=	..... cm
c	5 metres 40 centimetres	=	..... m ..... cm	=	..... cm
d	6 metres 90 centimetres	=	..... m ..... cm	=	..... cm
e	1 metre 35 centimetres	=	..... m ..... cm	=	..... cm
f	8 metres 25 centimetres	=	..... m ..... cm	=	..... cm
g	4 metres 5 centimetres	=	..... m ..... cm	=	..... cm
h	8 metres 7 centimetres	=	..... m ..... cm	=	..... cm

4. Copy and complete :-

a	210 cm	=	2 m 10 cm	=	2 metres ..... centimetres
b	314 cm	=	3 m ..... cm	=	..... metres ..... centimetres
c	684 cm	=	..... m ..... cm	=	..... metres ..... centimetres
d	490 cm	=	..... m ..... cm	=	..... metres ..... centimetres
e	536 cm	=	..... m ..... cm	=	..... metres ..... centimetres
f	761 cm	=	..... m ..... cm	=	..... metres ..... centimetres
g	301 cm	=	..... m ..... cm	=	..... metres ..... centimetres
h	905 cm	=	..... m ..... cm	=	..... metres ..... centimetres

5. A tortoise walks **950 cm** to a piece of lettuce.

Write this in **metres** and **centimetres**.



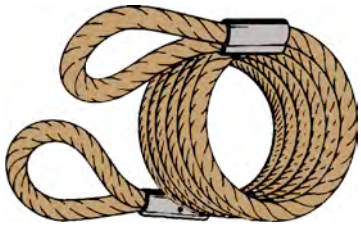
6. 

A toy car runs round a track of length **408 cm**.

Write this in **metres** and **centimetres**.

7. A piece of rope is **6 m 75 cm** long.

Write its length in **centimetres**.



8. 

A ball bounced along a path for **8 metres and 5 centimetres**.

For how many **centimetres** did it bounce ?

9. A giraffe is **5 m 32 cm** tall.

Write its height in **centimetres**.

10. 

Ben won the long jump competition in the school sports with a jump of **2 metres and 1 centimetre**.

Write this length in **centimetres**.

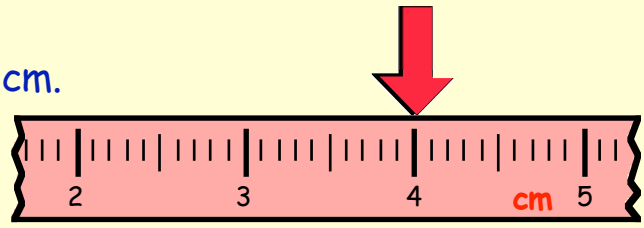
11. 4 pieces of wood have a length of :-

200 cm 200 cm 200 cm 300 cm

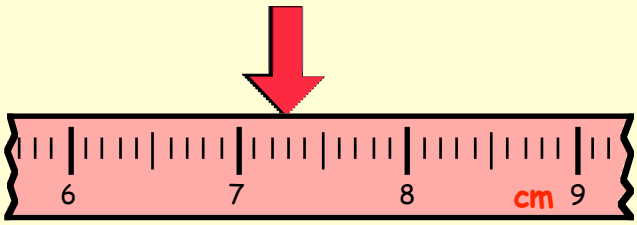
What is their **total length** :- **a** in centimetres **b** in metres ?

Reading Scales

The arrow is pointing exactly to **4** cm.

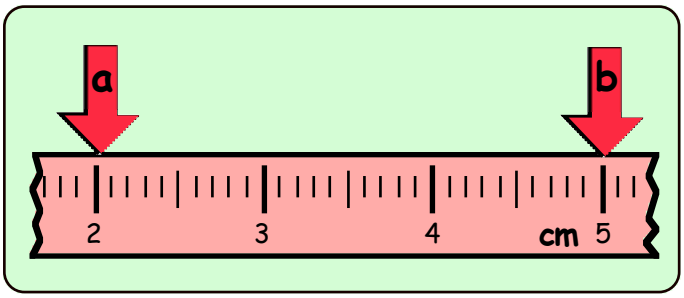


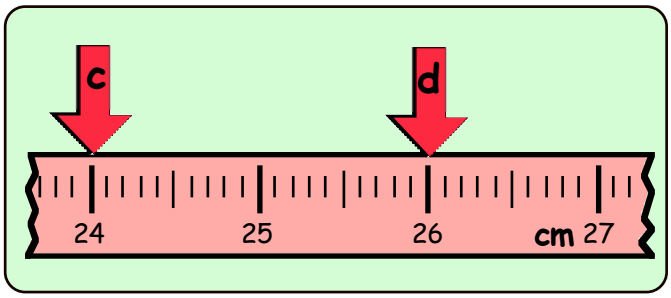
This time, we say that the arrow is **nearer** to **7 cm** (than it is to **8 cm**).

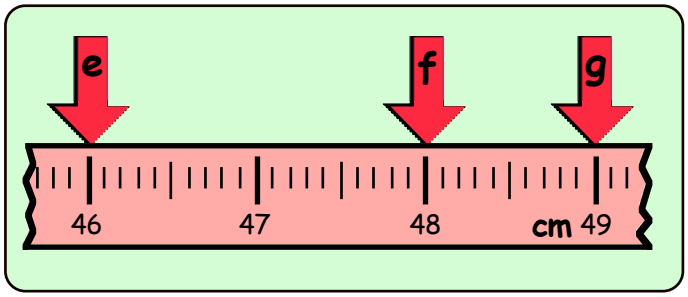


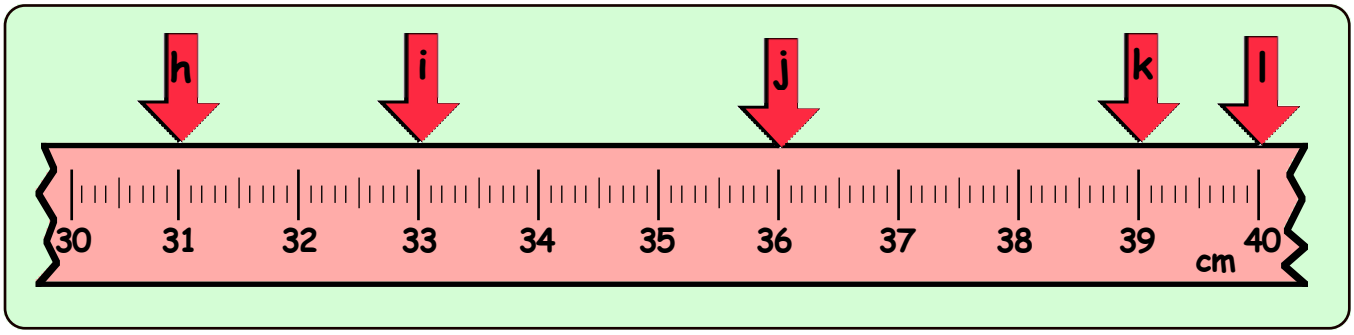
Exercise 4

1. To what numbers are these arrows pointing ?

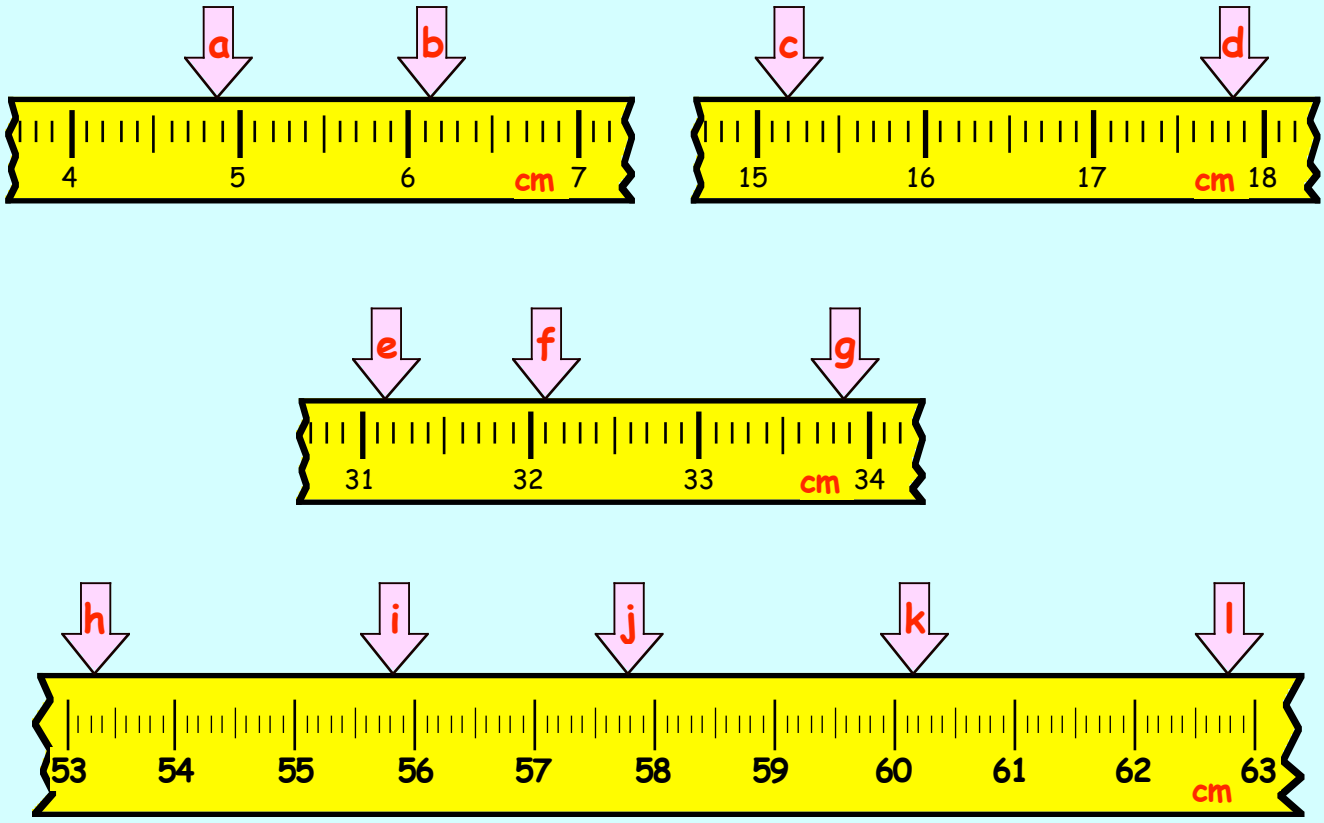








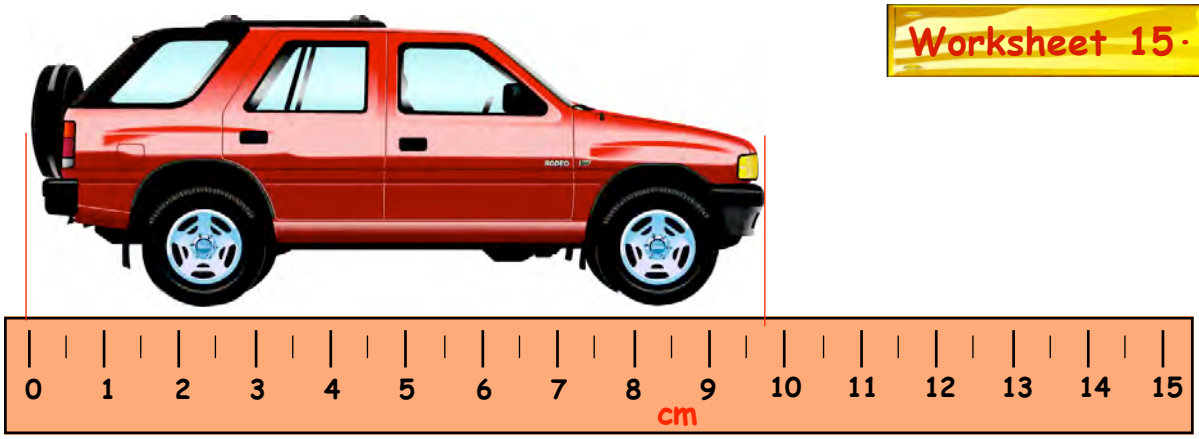
2. Can you see that **a** below is close to **5 cm** ?
For each letter , say which number the arrow is **nearest** to.



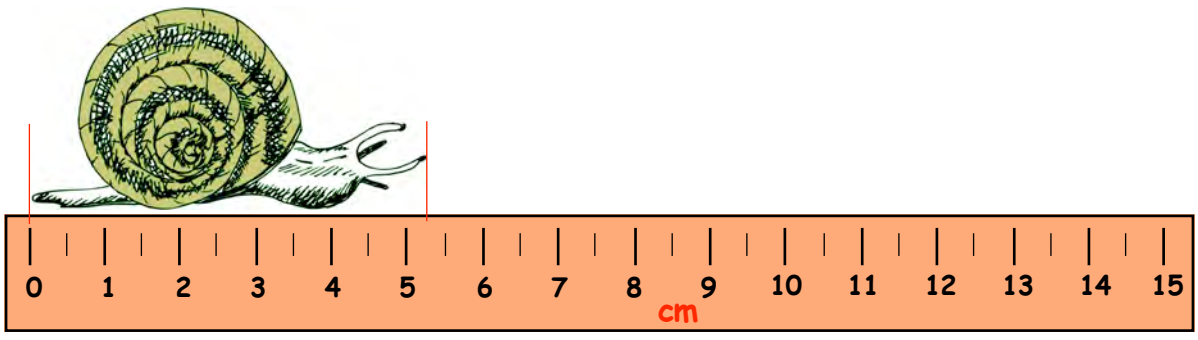
3. Write down the lengths of these objects to the **nearest centimetre**.

Worksheet 15·3

a



b



Topic in a Nutshell

1. Use **your ruler** to measure these lines and write down your answers.

   a ——————————

   b ——————————————

   c ————————————————————————

2. Measure and write down the height of the candle.

3. a Draw a line across your page **12 centimetres** long.

   b Draw a sloping line **6 centimetres** long.

4. How many **centimetres** are there in :-

   a 2 m b 4 m c 9 m d 7 m ?

5. How many **metres** are in :-

   a 300 cm b 600 cm c 800 cm d 1000 cm ?

6. Write 7 metres 45 centimetres in centimetres.

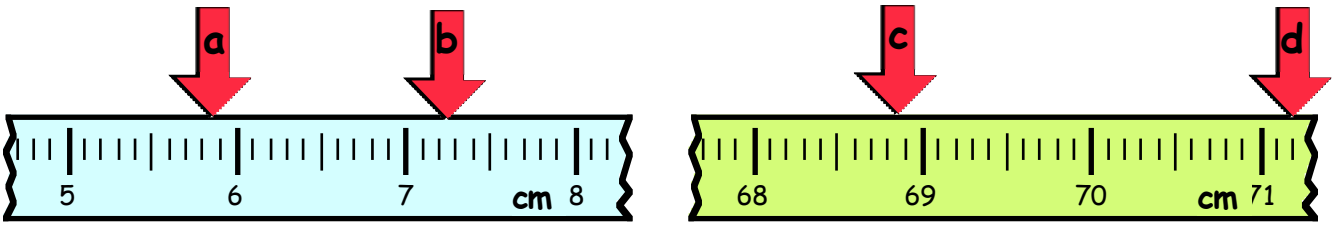
7. Write 440 centimetres in metres and centimetres.

8. Put these lengths in order, **largest first** :-

   5 m 34 cm, 5 m 43 cm, 5 m 3 cm, 5 m 30 cm,

9. This bear cub is 1 m 25 cm tall. What is its height **in cm** ?

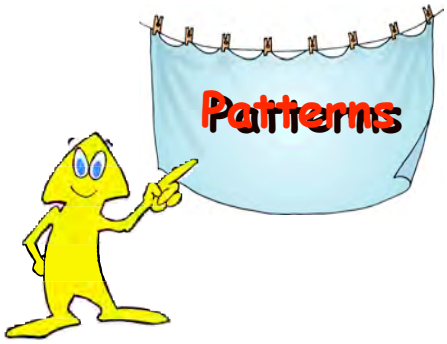
10. What numbers are these arrows **nearest** to ?



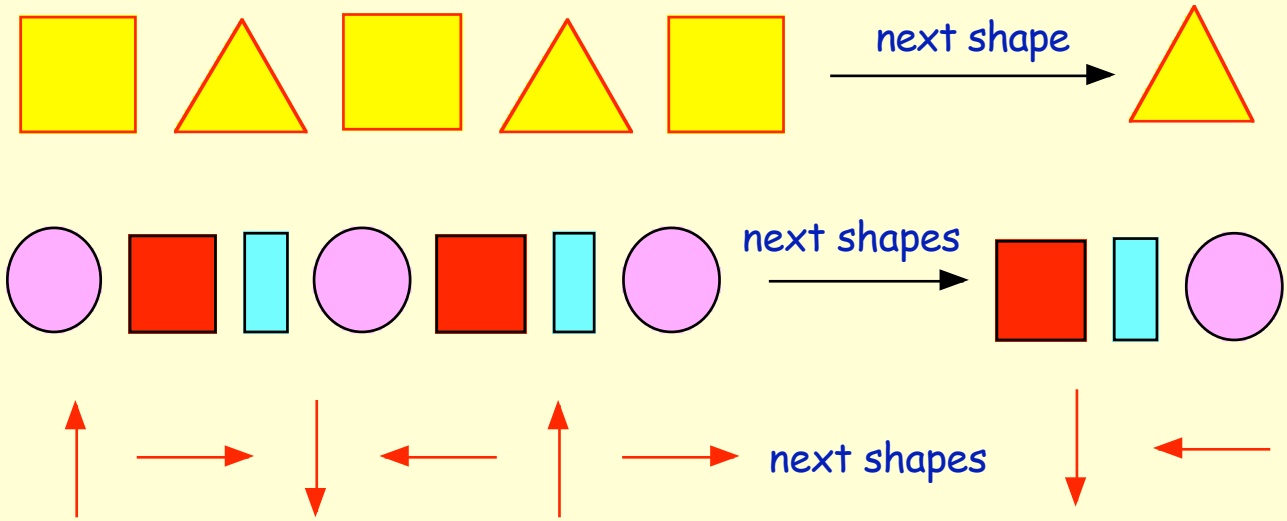
Chapter 16

Drawing Patterns

You will need coloured pencils for this chapter.



Patterns can be made using shapes, colours and lines.

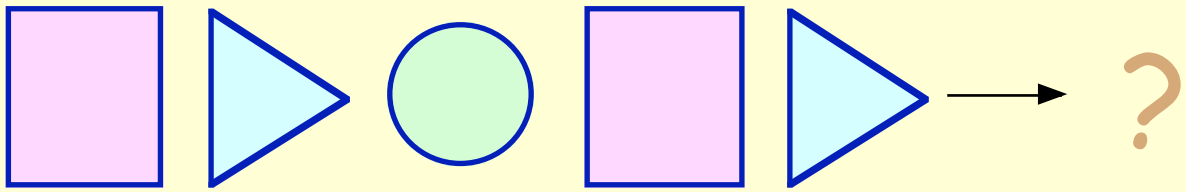


Exercise 1

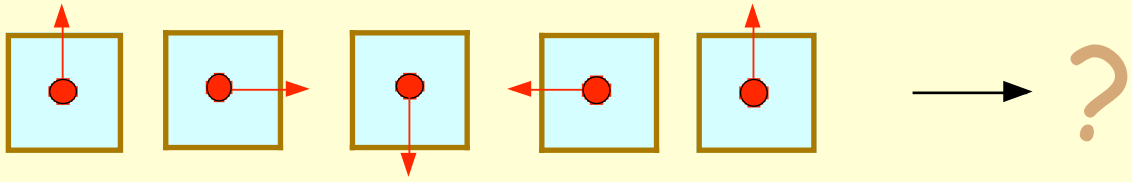
Worksheet 16·1

1. Draw and colour the next 2 shapes of each of these patterns :-

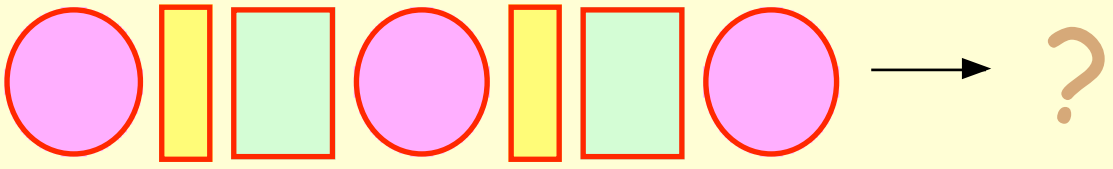
a

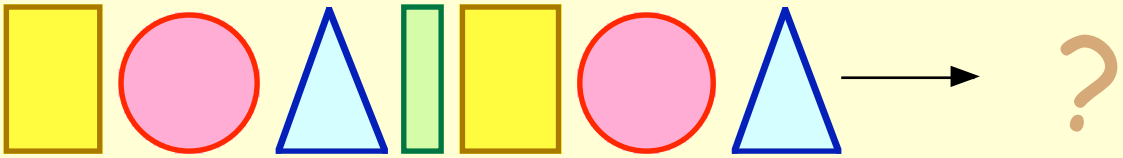


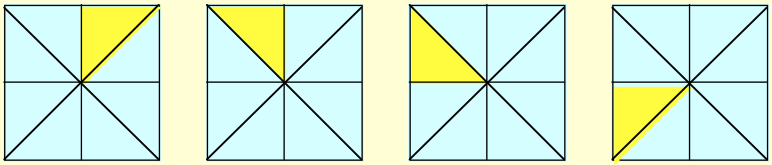
b



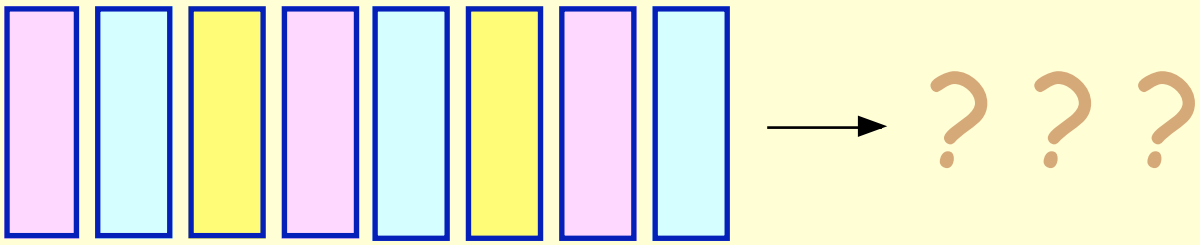
c

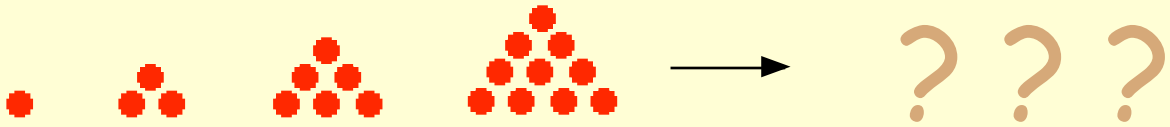


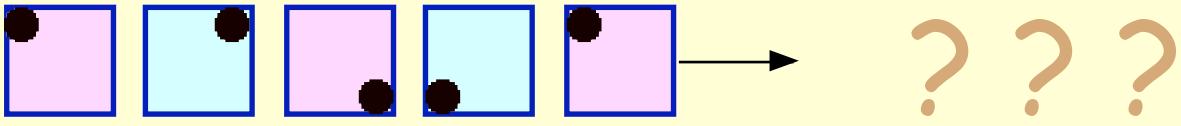
d 

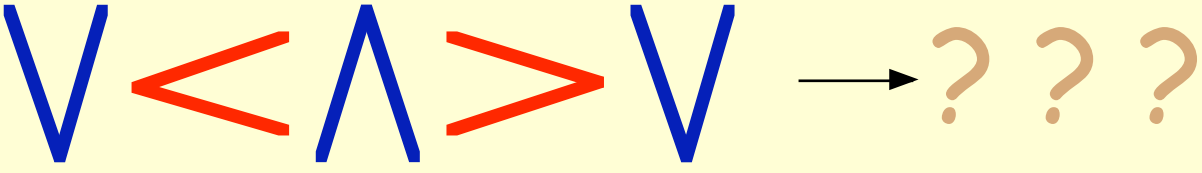
e 

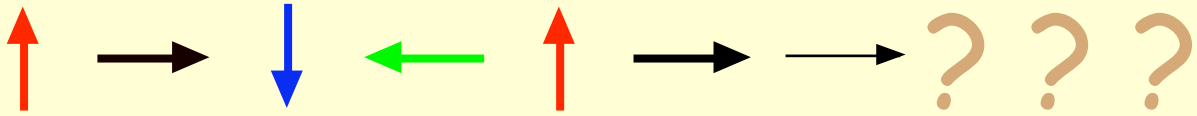
2. For each pattern, draw the **next 3 shapes** :-

a 

b 

c 

d 

e 

3. Make a nice coloured pattern of your own. Show it to your teacher.

Patterns with Letters

Patterns can be made using letters.

A B C D E F	next letter is G
Z Y X W V U	next letter is T
A C E G I K M	next letter is O.

Exercise 2

1. Write down all the letters of the **alphabet** in order.

2. Use your alphabet to help write the next **2 letters** in each pattern :-

a	G H I J K ...	b	r s t u v w ...
c	K J I H G ...	d	k m o q s u ...
e	y x w v u ...	f	A D G J M ...
g	AZ BY CX DW EV ...		

3. **Copy** each list. Fill in the missing letters.

a	A B .. D E ..	b	z .. x w v .. ..
c	.. g h i	d	.. .. E G I K ..

4. Make a letter pattern of your own and show it to your teacher.

Number Patterns

Patterns can be made using numbers.

1 2 3 4 5 6	next number is 7
16 15 14 13 12	next number is 11
30 40 50 60 70	next number is 80.

Exercise 3

1. For each of these patterns, write the next **2 numbers** :-

a	7 8 9 10 11 ...	b	25 26 27 28 29 ...
c	23 22 21 20 ...	d	2 4 6 8 10 12 ...
e	5 10 15 20 ...	f	11 22 33 44 55 ...
g	3 6 9 12 15 ...	h	28 24 20 16 12 ...

2. **Copy** each list. Fill in the missing numbers.

a	5 10 .. 20	b	2 .. 6 8 10 .. ..
c	10 .. .. 40 50 ..	d	.. .. 9 12 15 .. ..
e	22 .. 18 16 ..	f	.. .. .. 18 15 12 ..

g	65	..	55	50	..		h	..	..	..	33	22	11	..
i	..	..	60	50	40		j	..	..	..	35	40	45	..
k	..	..	53	51	..	47	..	43	41	..	..	..	33	

3. Write out the following pattern of numbers :-

a **even** numbers **up to** 30

b **odd** numbers **up to** 40

c **even** numbers **between** 50 and 70

d **odd** numbers **between** 80 and 100.

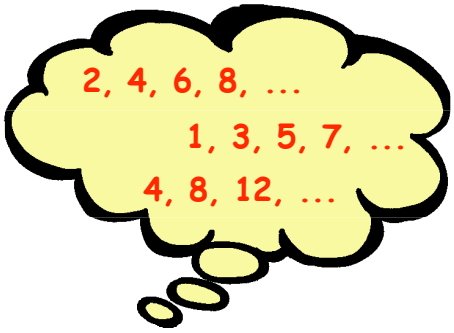
e the **2** times table answers

f the **3** times table answers

g the **4** times table answers

h the **5** times table answers

i the **10** times table answers.

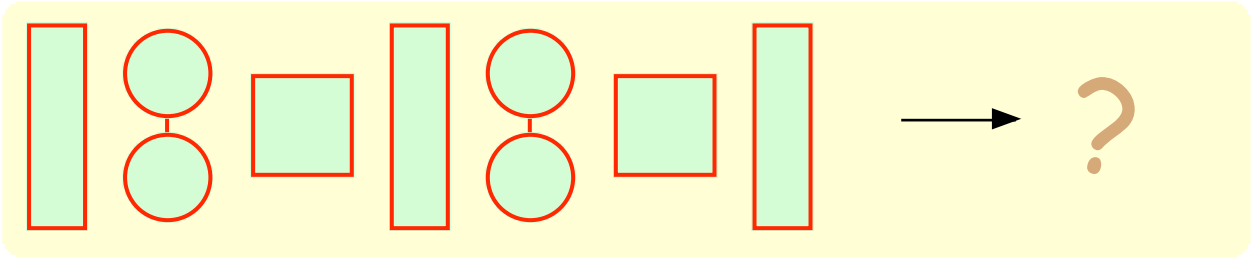


4. Try to make up a few number patterns of your own.
Show them to your teacher.

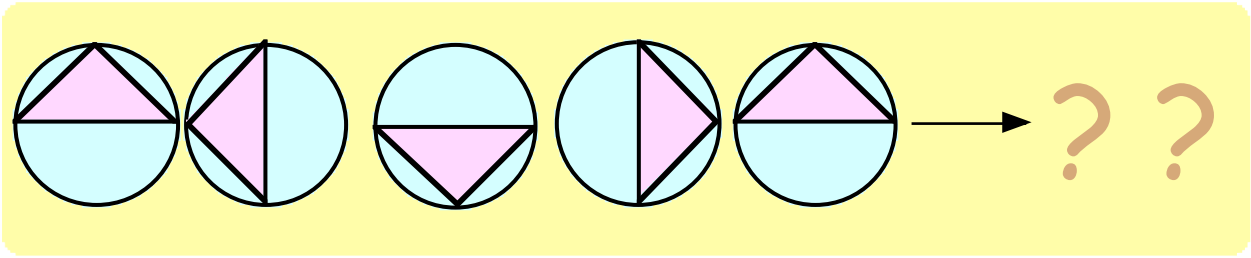
Work Sheets 16·2

Topic in a Nutshell

1. Draw the next shape in this pattern :-



2. Draw the next **two** shapes in this pattern :-



3. Write the **next** letter or number :-

a	P	Q	R	S	T	..		b	21	23	25	27	29	..
c	54	51	48	45	..			d	w	u	s	q	o	m	k	..

4. **Copy** each list. Fill in the missing letters or numbers.

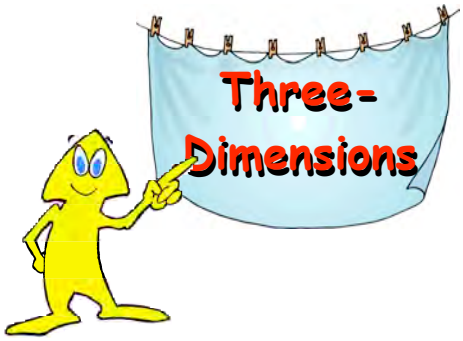
a	10	20	..	40	..			b	a	c	e	..	i	k	..	..
c	35	..	..	20	15	..		d	..	..	o	n	m	..	..	

5. Write the pattern of **odd** numbers **between** 20 and 40.

Chapter 17

3-D Shapes

You will need a set of 3 dimensional shapes to help answer the questions.



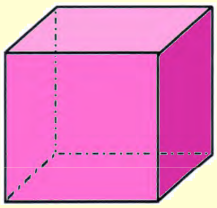
Remember

2 dimensional (2-D) shapes are **flat shapes**.

(square, rectangle, triangle and circle.)

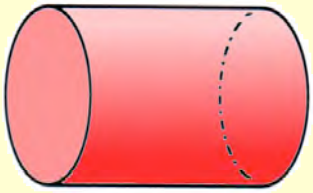
3 dimensional (3-D) shapes are **solid shapes**.

Here are some **3-D shapes** you should already know :-

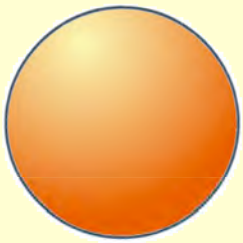


cube

cuboid



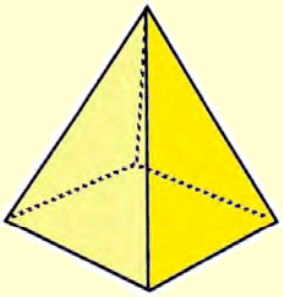
cylinder



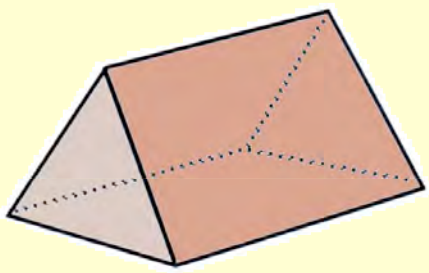
sphere

cone

Shown below are two more **3-D shapes** :-



square pyramid

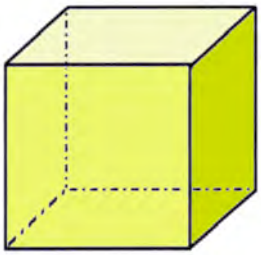


triangular prism

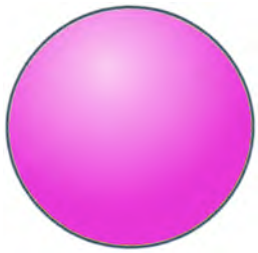
Exercise 1

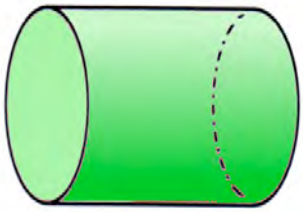
Worksheet 17·1

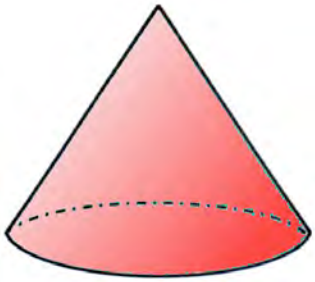
1. Write the name of each 3-D shape :-

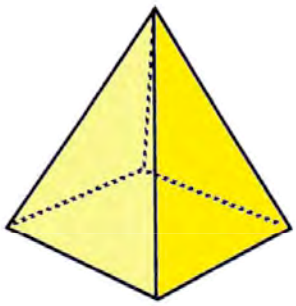
a 

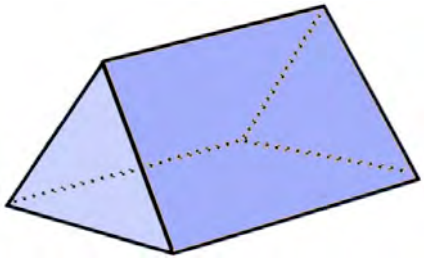
b 

c 

d 

e 

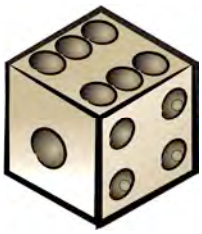
f 

2. Write the **name** of this 3-D shape. ⟶ 

3. Look at each picture below.

Write the **name** of each 3-D shape.

(Use cube, cuboid, cylinder, cone, sphere, square pyramid or triangular prism.)

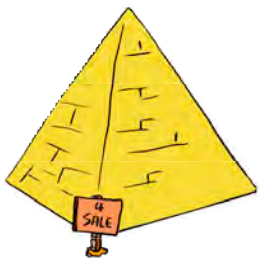
a 

b 

c 

d 

e 

f 

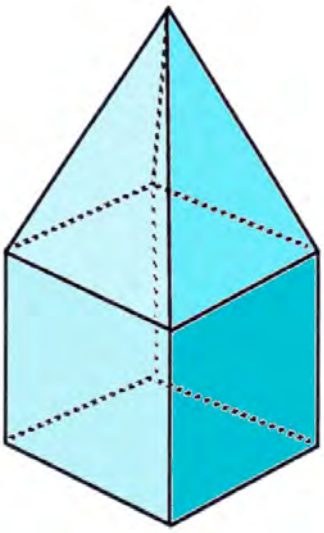
g 

h 

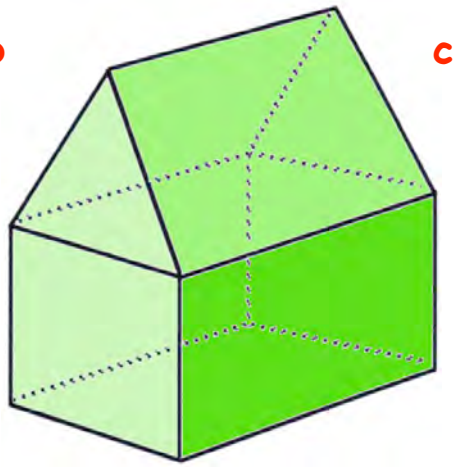
4. Look at the shapes below.

Make a list of the **3-D shapes** used in each picture.

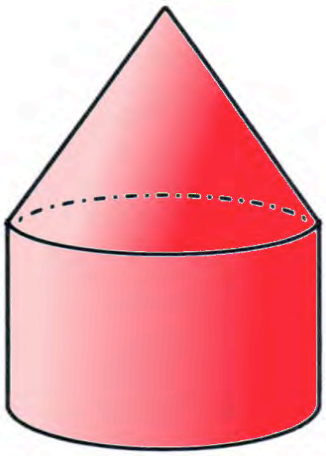
a



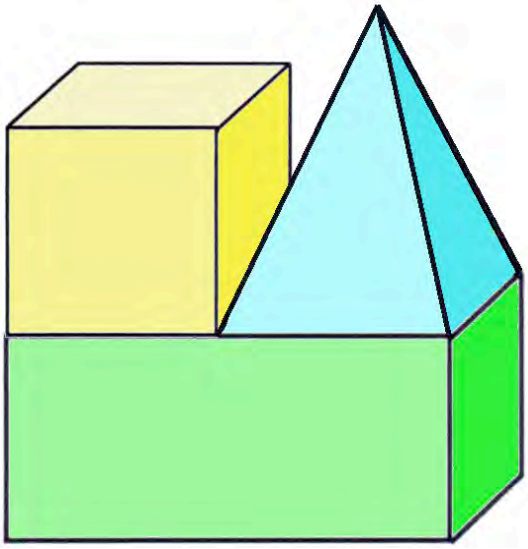
b



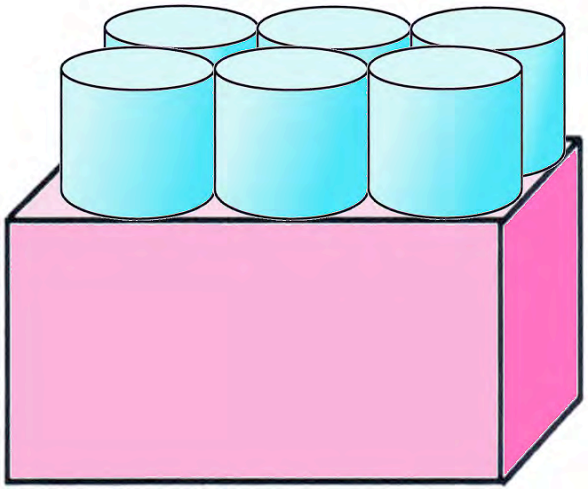
c



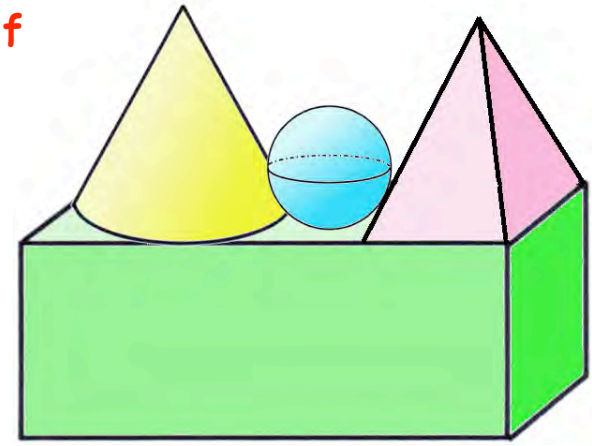
d



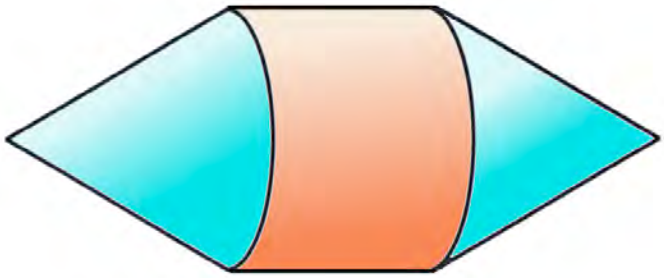
e



f



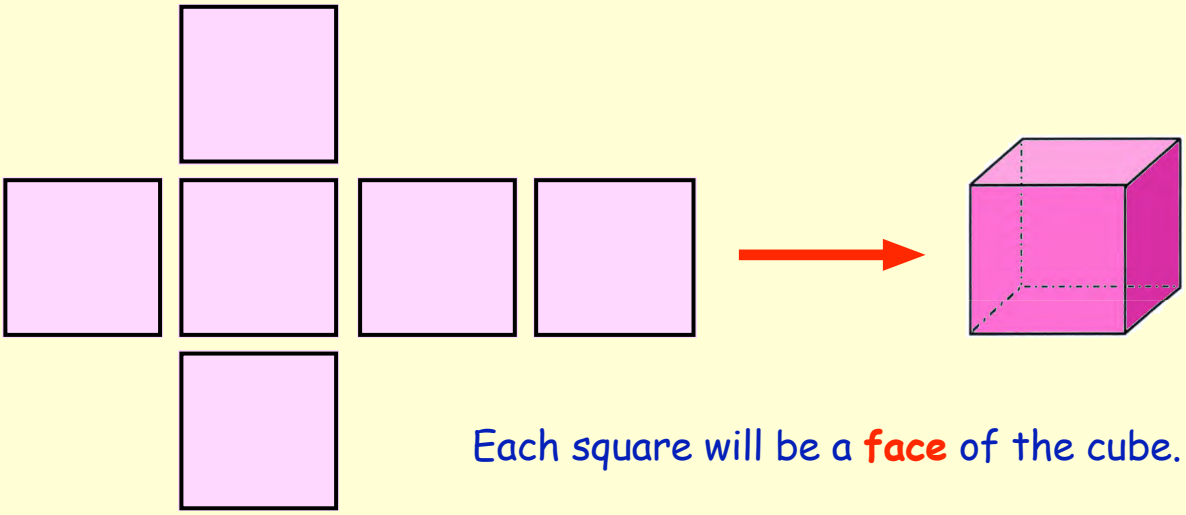
g



Making 3-D Shapes

2-D shapes can be used to make 3-D solid shapes.

You need **6 squares** to make a **cube**.



Each square will be a **face** of the cube.

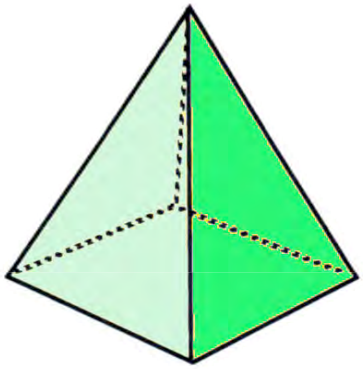
Exercise 2

1. List the type of **faces**, (**2-D shapes**), you need to make this **cuboid**.

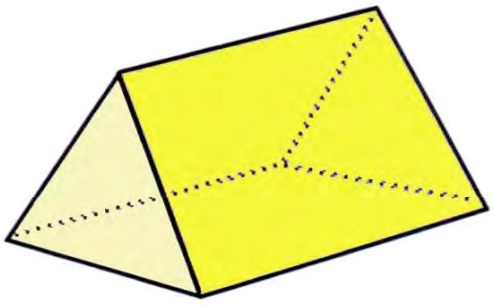
2. List the type of **faces**, (**2-D shapes**), you need to make this **cuboid**.

3. List the type of **faces**, (**2-D shapes**), you need to make each shape below.

a



b



4. Name each shape.

   a What shape is made from **6 rectangles** ?

   b What shape is made from **6 squares** ?

   c What shape is made from **4 rectangles** and **2 squares** ?

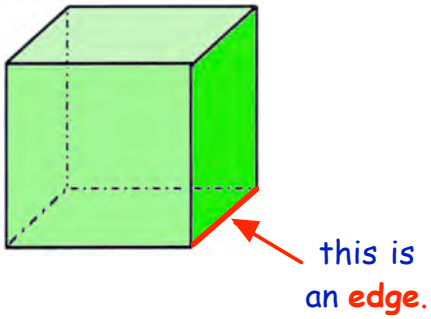
   d What shape is made from **2 triangles** and **3 rectangles** ?

   e What shape is made from **1 square** and **4 triangles** ?

5. a Count the number of **edges** in a **cube**.

   b Now count the number of **corners**.

   Can you see that a cube has **12 edges** and **8 corners** ?

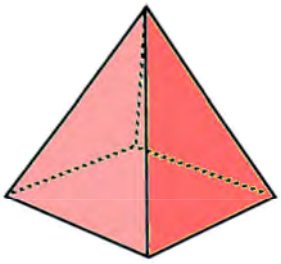


6. a Count the number of **edges** in a **cuboid**.

   b Now count the number of **corners**.

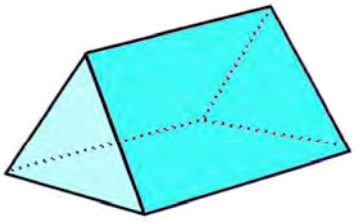
7. a Count the number of **edges** in a **square pyramid**.

   b Now count the number of **corners**.



8. a How many **edges** are in a **triangular prism** ?

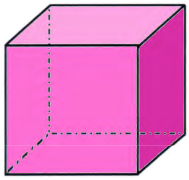
   b Now count the number of **corners**.

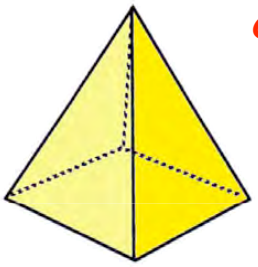


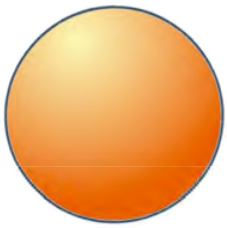
Worksheet 17·2 Worksheet 17·3 Worksheet 17·4

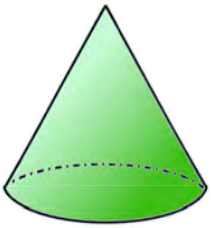
Topic in a Nutshell

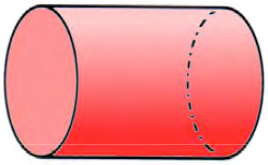
1. Write the name of each **3-D shape** :-

a 

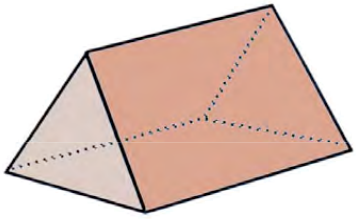
b 

c 

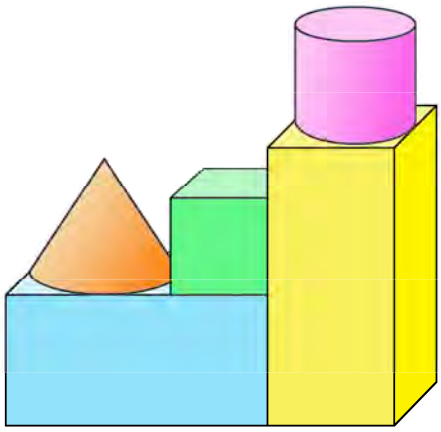
d 

e 

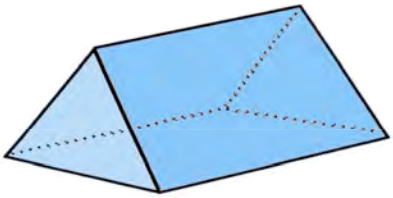
f 

g 

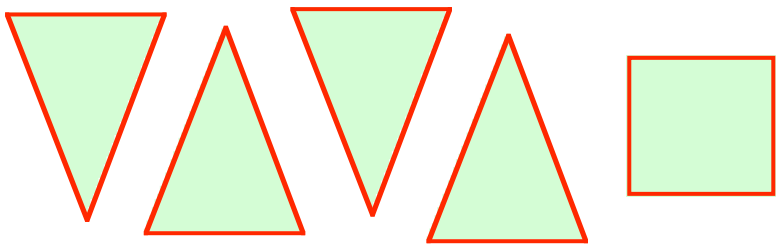
2. List the 3-D shapes used in the picture.



3. List the faces, (**2-D shapes**), you need to make a **triangular prism**.



4. Name the **3-D shape** that is made from **4 triangles** and **1 square**.



5. 

a How many **edges** are in a **cuboid** ?

b How many **corners** does it have ?

Chapter 18

Calculators should NOT be used.

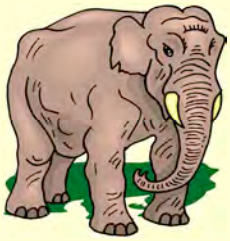
Words used in Weighing

In comparing **LENGTH**, we used certain words, such as

longer - shorter - wider - narrower - taller - smaller.

In measuring **WEIGHT** the words we use are :-

lighter and **heavier.**



the elephant is **heavier** than the mouse

the balloon is **lighter** than the jet plane

Exercise 1

1. Which one is the **lighter** :-

   a a feather or a pencil
   b a bear or a monkey
   c a chair or a sofa
   d a hammer or a screwdriver
   e a car or a bus
   f a leaf or a branch ?

2. Which one is the **heavier** :-

   a a brick or a concrete slab
   b a bowling ball or a golf ball
   c a computer or a mouse mat
   d an eye lash or a finger nail
   e a glass bowl or a plastic bowl
   f a house phone or a pencil
   g a leather jacket or a T-shirt
   h a bus or a car ?

3. Put these garden objects in order of weight. Start with the **heaviest**.

clippers

plastic rake

metal wheelbarrow

metal fork

motor mower

4. Put these computer objects in order of weight. Start with the **lightest**.

computer mouse

printer

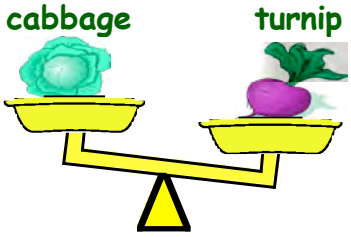
computer

floppy disk

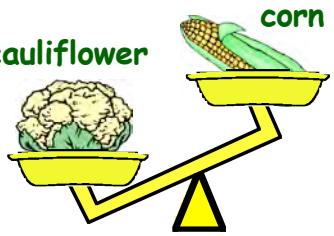
laptop

5. Which vegetable is the **heavier** ?

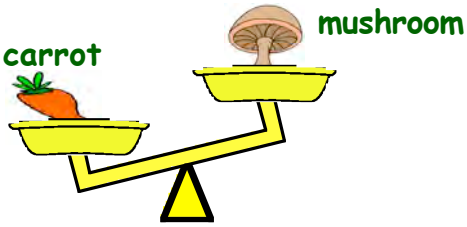
a



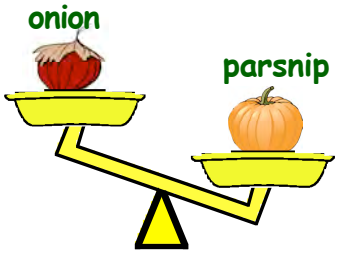
b



c

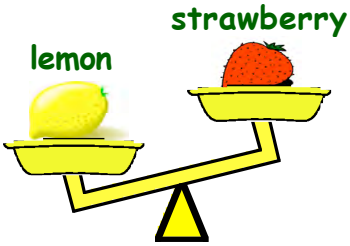


d

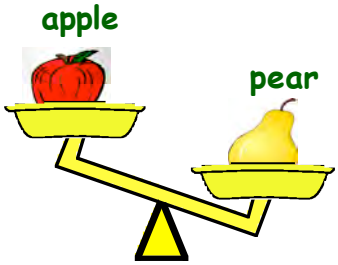


6. Which fruit is the **lighter** ?

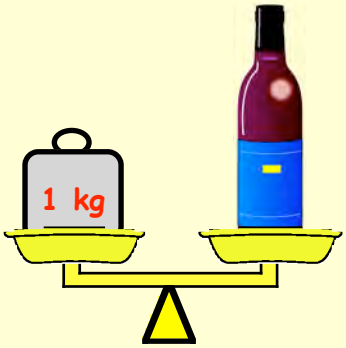
a



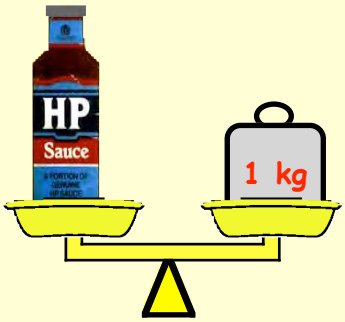
b



Measuring in kilograms



The litre bottle of fizzy pop and the **big** bottle of sauce weigh **1 kilogram each**.



Look at this **apple**. - 

Will it weigh **more** or **less** than a bottle of wine ?

If it is **lighter**, then it must weigh **less** than **1 kilogram** !

1 kilogram can be written as **1 kg** for short.

Exercise 2

1. Which is the **lighter** :-

a  2 kg  3 kg

b  6 kg  5 kg

c  40 kg  82 kg

d  65 kg  44 kg

2. Put each list in order. Start with the **heaviest**.

a 3 kg, 7 kg, 4 kg.

b 9 kg, 5 kg, 12 kg.

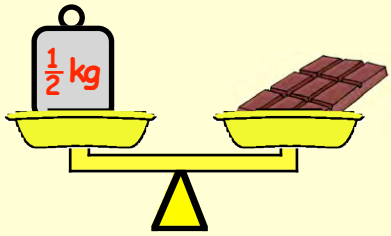
c 13 kg, 19 kg, 16 kg.

d 27 kg, 19 kg, 21 kg, 6 kg.

e 31 kg, 38 kg, 30 kg, 33 kg.

f 47 kg, 39 kg, 61 kg, 52 kg.

This bar of chocolate weighs $\frac{1}{2}$ kg.

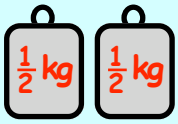


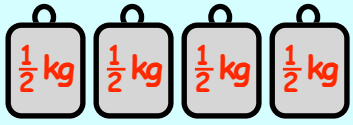
3. How many 

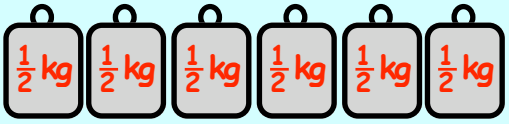
are the same as 

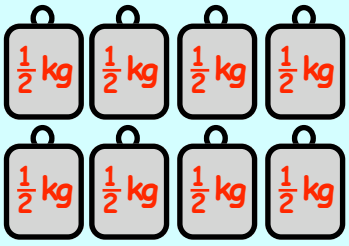
?

4. What is the **total** weight, in **kilograms** each time here :-

a 

b 

c 

d 

5. How many $\frac{1}{2}$ **kilogram** weights are the same as :-

a 1 kg **b** 4 kg **c** 5 kg **d** 10 kg ?

6. Ask your teacher for **five objects**, some **kilogram weights** and a **set of balancing scales**.

Worksheet 18·1

Weigh each object and put a tick in the correct box on the worksheet.

OBJECT	more than 1 kg	less than 1 kg	1 kg exactly

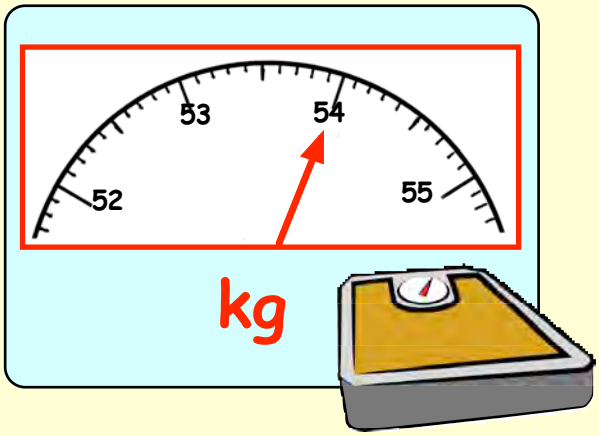
fill in WORKSHEET 18·1

7. Ask your teacher for **another five objects**, the **kilogram weights**, some **half kilogram weights** and the **balancing scales**.

Weigh each object and put a tick in the correct box on the worksheet.

Reading Scales

The oranges weigh **2 kg**

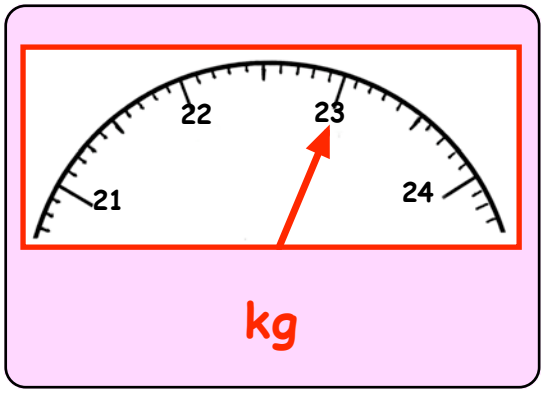


The weight on the bathroom scales is **54 kg**.

Exercise 3

1. What do these pears weigh ?

2. What weight is shown on the scale below ?



3. Go to **Worksheets 18.2**.

Write down the weight of each object to **the nearest killogram**.

Worksheet 18·2

Introduction to Volume

EXTENSION

Volume is "the amount of **space** an object takes up".

The mug takes up more space than the glass.

=> The cup has a **larger volume**.

Exercise 4

1. Which of these objects holds **more** :-

   a a bath or a sink

   b a teaspoon or a soup spoon

   c a vase or a glass

   d a cupboard or a drawer

   e a fridge or a cool box

   f a microwave or a cooking oven ?

2. Which takes up **less** space -

   a golf ball or a football ?

3. Put these objects in the correct order.
   Start with the one which takes up the **most** space.

car

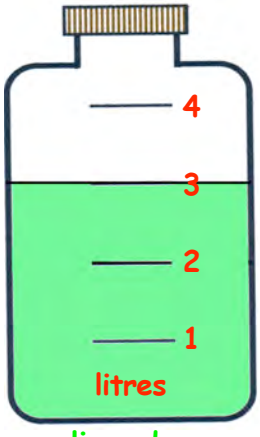
van

jet-ski

bus

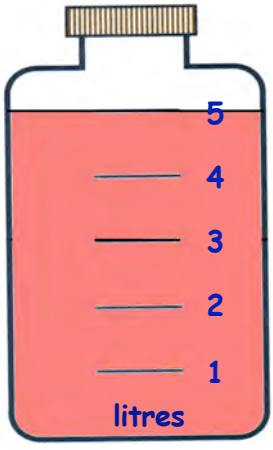
4. What are the readings on the bottles (in litres) ?

a



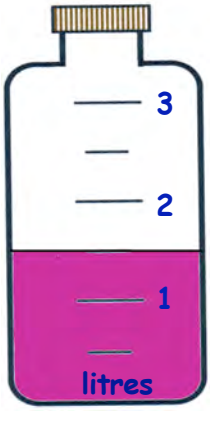
limeade

b



orange

c



blackcurrant

Topic in a Nutshell

1. Write down the name of the **heavier** object each time :-

   a a fridge or a microwave

   b a banana or a melon

   c a steak pie or a scone

   d a skate-board or a bicycle.

2. Put these animals in order of weight, starting with the **lightest**.


cow


hen


buffalo


butterfly


goat

3. Put each list in order, starting with the **lightest**.

   a 7 kg, 12 kg, 2 kg.

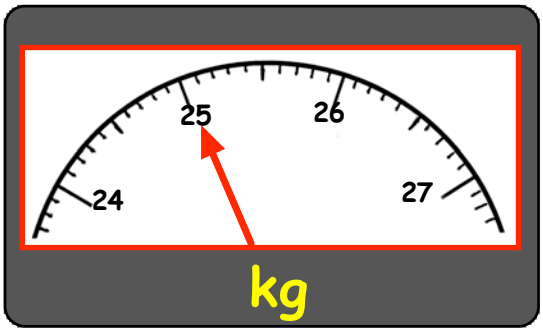
   b 51 kg, 37 kg, 73 kg.

4. A weight-lifter is holding up **100** lots of $\frac{1}{2}$ kg weights.
   How many **whole** kilograms is he holding ?

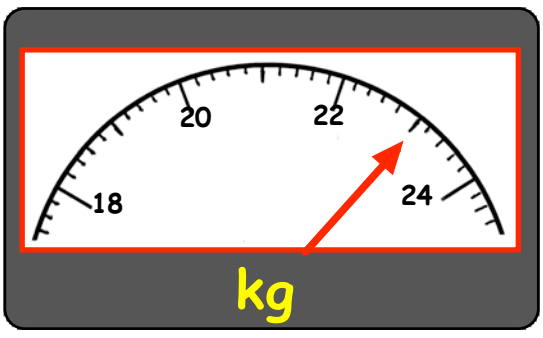
5. I have a **6 kilogram** bag of toffees.
   I want to split this into $\frac{1}{2}$ kg bags.
   How many bags can I make ?

6. Write down the weights shown on the scales below :-

   a



   b



Chapter 19

Calculators should NOT be used anywhere in this chapter.

1. Write the following numbers **in words** :-

   a 87 **b** 326 **c** 508 **d** 790.

2. Write the following numbers using **digits** :-

   a seventy three **b** six hundred and seventeen

   c four hundred and sixty **d** nine hundred and two.

3. What number comes :-

   a 10 **after** 206 **b** 100 **before** 517 **c** 50 **after** 316

   d 200 **before** 640 **e** 20 **before** 350 **f** 400 **after** 428 ?

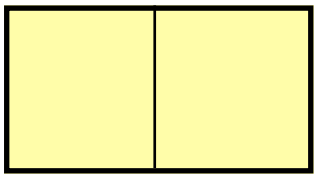
4. Write these numbers in order putting the **LARGEST** first :-

   a 299, 196, 310, 470, 89, 306, 401.

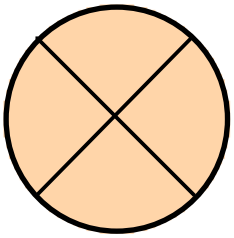
   b 706, 698, 700, 688, 704, 716, 697, 678.

5. **Trace** or **copy** each shape neatly and colour in $\frac{1}{2}$ of it each time :-

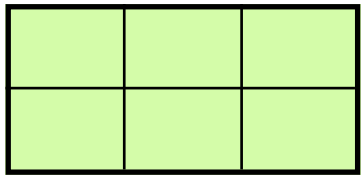
   a



   b

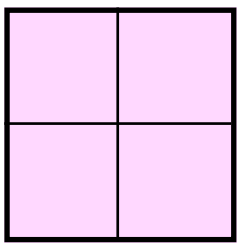


   c

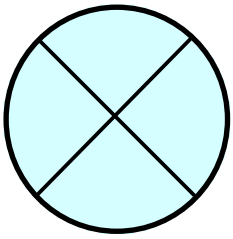


6. **Trace** or **copy** each shape neatly and colour in $\frac{1}{4}$ of it each time :-

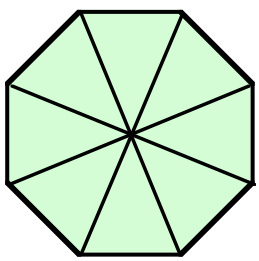
   a



   b



   c



7. a To find a **half** of something what do you divide by ?

   b To find a **quarter** of something what do you divide by ?

8. Lucy bought a melon for **47p**.

   a What change will she get from **£1** ?

   b What coins might the shopkeeper give her as change ?

9. a How many **5 pences** can Lucy get for **one** 50 pence piece ?

   b How many **10 pences** can Lucy get for **four** 20 pence pieces ?

   c How many **2 pences** can Lucy get for **three** 10 pence pieces ?

10. Find **mentally** :-

a 6 + 4	b 43 + 5	c 80 - 30	d 120 + 70
e 69 - 5	f 22 - 7	g 500 - 200	h 280 + 30

11. **Work out** :-

a 61 + 37	b 39 + 42	c 88 - 34	d 61 - 57

12. Find **mentally** :-

a 3 x 8	b 4 x 9	c 5 x 7	d 2 x 8
e 10 x 7	f 18 ÷ 2	g $5\overline{)15}$	h 32 ÷ 4
i $10\overline{)70}$	j 5 x 6	k 21 ÷ 3	l 60 ÷ 10

13. **Find** :-

a 42 x 4	b 24 x 5	c 73 x 10	d $3\overline{)45}$
e $10\overline{)270}$	f 65 ÷ 5	g 45 x 3	h $4\overline{)68}$

14. Lucy, Ben, Nick and Jane share **64 pence** among themselves **equally**.

How much does Nick get ?

15. **a** What is the total cost of **4** chairs if each one costs **£22** ?

b A biscuit weighs **15 grams**. What is the weight of **4** biscuits ?

16. Round each of these to the nearest **10** :-

a 72 **b** 59 **c** 24 **d** 18.

17. **a** Round 83 to the nearest **10** **b** Round 38 to the nearest **10**.

18. Find :- **a** $\frac{1}{2}$ of £24 **b** $\frac{1}{2}$ of 82 g **c** $\frac{1}{4}$ of £24.

19. Jane looks at the following numbers :

51, 46, 127, 17, 92, 230, 79, 8, 804, 395.

Help Jane by writing down all of the **ODD** numbers.

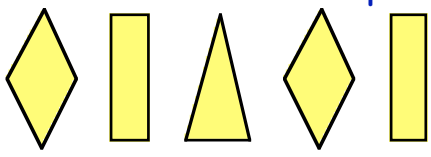
20. Find the next **3** numbers in each **pattern** :-

a 4, 8, 12, 16 **b** 3, 6, 9, 12 **c** 90, 80, 70, 60

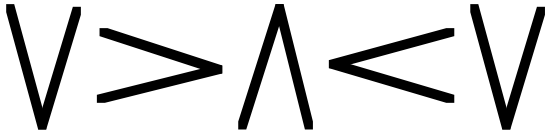
d 7, 9, 11, 13 **e** 1, 5, 9, 13 **f** 64, 62, 60, 58.

21. Draw the next **two** shapes in each of the following patterns :-

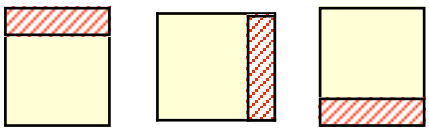
a



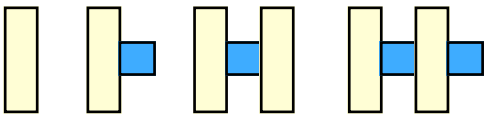
b



c



d



22. **Copy** the following and fill in the missing numbers :-

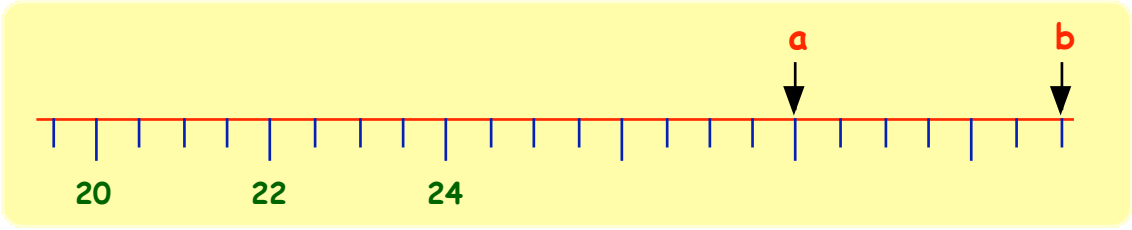
a 7 + ... = 12 **b** 18 - ... = 14 **c** 4 x .... = 24

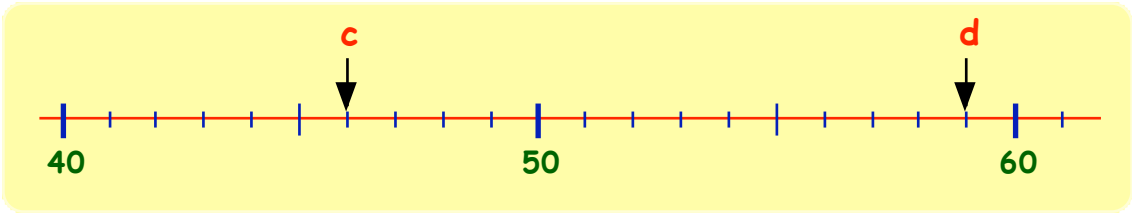
d 45 ÷ ... = 9 **e** ... - 6 = 11 **f** ... ÷ 3 = 5.

23. Write down which sign (+, −, x, ÷) is missing here :-

a 3 .... 8 = 24 **b** 4 .... 4 = 8 **c** 20 .... 2 = 10 **d** 20 .... 8 = 12.

24. What numbers are the arrows pointing to ?





25. Put these lengths in order, starting with the **LARGEST** :-

95 cm, 1 m 93 cm, 99 cm, 115 cm, 1 m 7 cm

26. **Change** :-

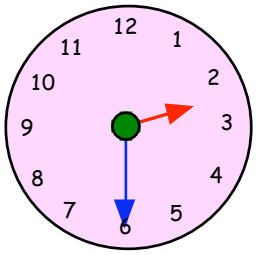
a **2 metres 65 centimetres** to **centimetres**

b **3 m 48 cm** to **cm** **c** **2 m 7 cm** to **cm**

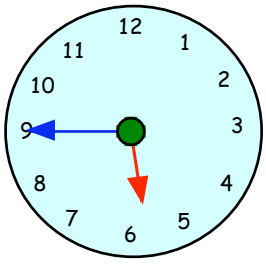
d **520 cm** to **m and cm** **e** **309 cm** to **m and cm.**

27. Write the times shown on these clocks.

a



b



28. Write down these "**digital**" times in words :-

a 08:30 **b** 12:45

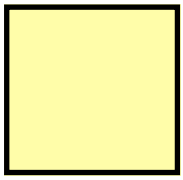
29. Put these in order, **earliest** first:-

May 18th, July 2nd, May 30th, June 24th.

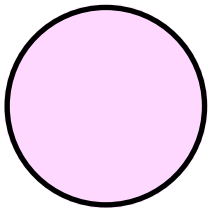
30. Write the following months in order, **EARLIEST** first :-

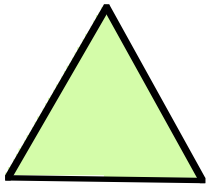
February, November, September, July, May.

31. What are the mathematical names for these shapes :-

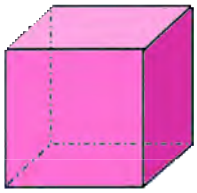
a 

b 

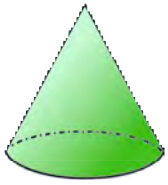
c 

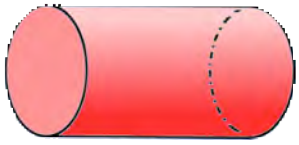
d 

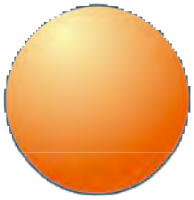
32. What are the proper mathematical names for these **solid** shapes :-

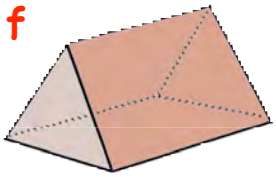
a 

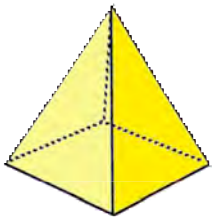
b 

c 

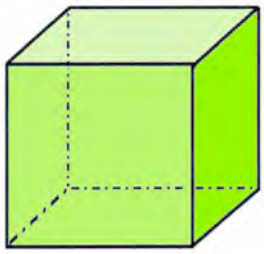
d 

e 

f 

g 

33. This shape is called a **cube**.

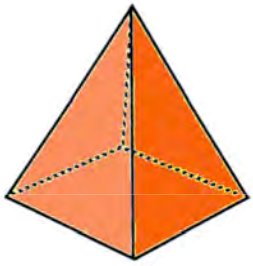


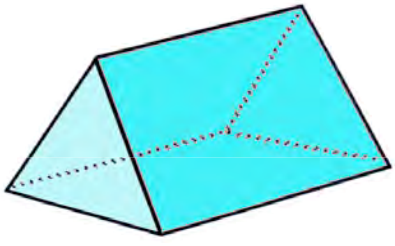
a How many "**faces**" does it have ?

b How many "**edges**" does it have ?

c How many "**corners**" does it have ?

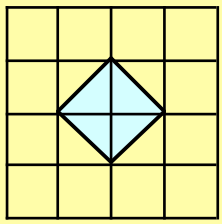
34. How many **faces**, how many **edges** and how many **corners** do these shapes have :-

a 

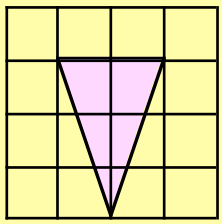
b 

35. Which of the following shapes are **good** shapes for tiling :-
(*covering a page with no gaps*)

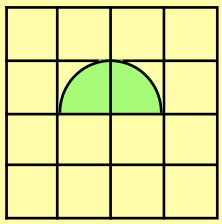
a



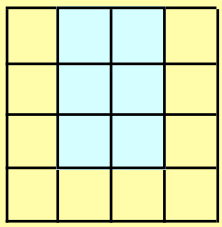
b



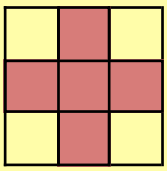
c



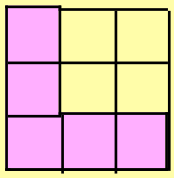
d



e



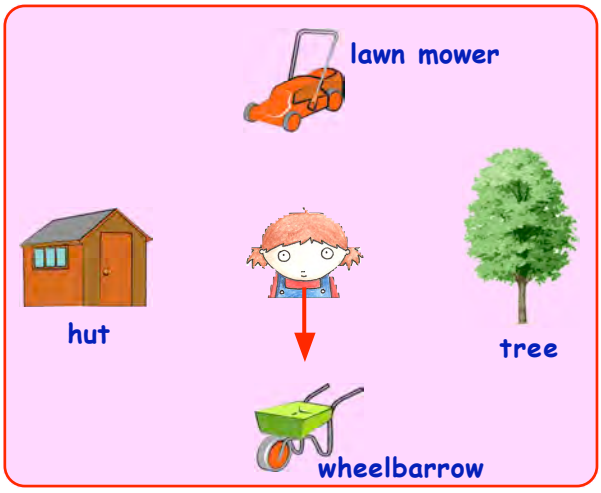
f



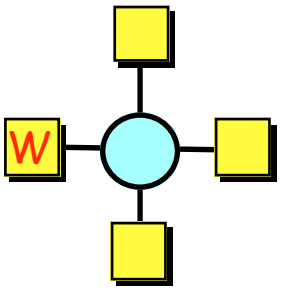
36. Jane is in the garden.
She is looking at the wheelbarrow.
What object would Jane be looking at if

a she made a **quarter turn** clockwise ?

b she made a **half turn** ?



37.



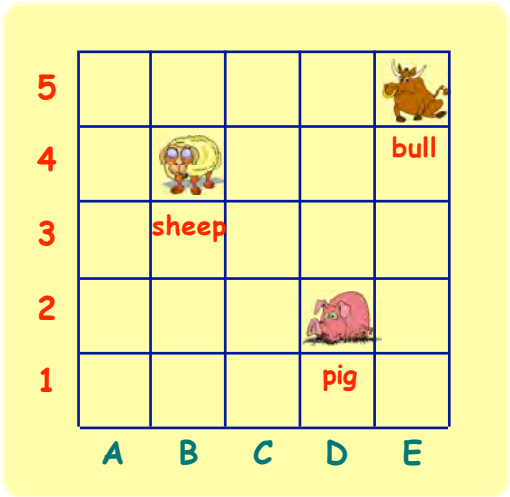
Make a **copy** of this **COMPASS**.

Fill in the other 3 directions.

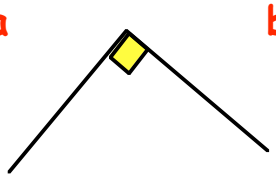
38. Look at this grid.

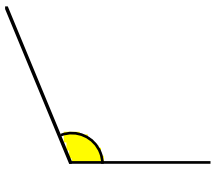
a Which animal is at **D2** ?

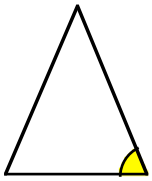
b Which animal is **3** boxes **right** and **1** box **up** from the animal at **B4** ?

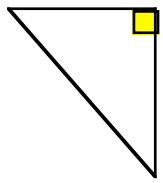


39. Which of the following angles are **right angles** :-

a 

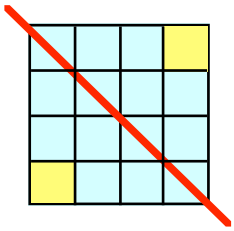
b 

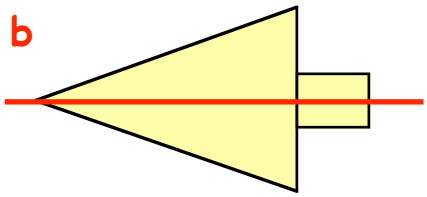
c 

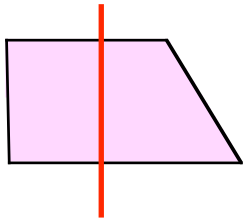
d 

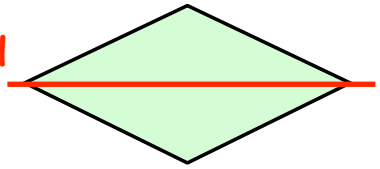
40. **You may use a mirror here.**

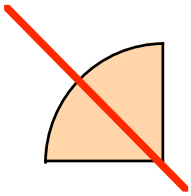
In which of these shapes is the red line a **line of symmetry** :-

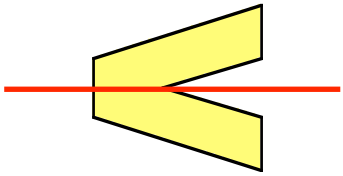
a 

b 

c 

d 

e 

f 

41. This table gives information about a group of children.

	Left Handed	Wear Glasses
Tom	Yes	No
Nick	No	Yes
Lucy	No	No
Anne	Yes	Yes
Mike	No	Yes

a Which 2 boys wear **glasses** ?

b One boy is **left handed**. Does he wear **glasses** ?

c How many **left handed** children wear **glasses** ?

42. A bar graph shows the hair colour of a group of children.

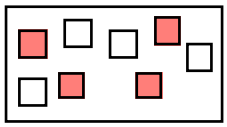
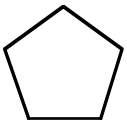
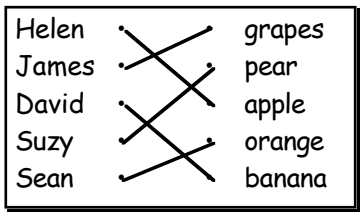
a Which is the **least** common colour of hair ?

b How many people have black hair ?

c How many **more** people have red hair than blonde hair ?

answers to LEVEL B

Answers to Chapter 0

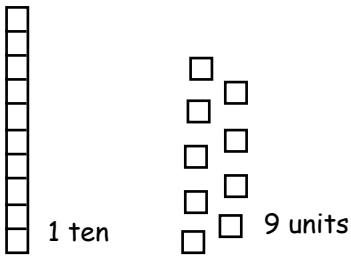
1. a 8 b 17
2. 4
3. a Nick b Sue c May
4. a/b 
5. 4, 7, 10, 11, 12, 13, 16, 19, 20
6. a 10 c 7
7. a B b D
8. 7
9. 12
10. a 20p b 1p
11. 9p
12. a 7p b 3p
13. 5p, 2p, 2p would do
14. 3 of them (8p, 10p, 9p)
15. a 7 b 9 c 10
    d 10 e 9 f 8
    g 8 h 10 i 8
16. a 4 b 6 c 1
    d 0 e 3 f 6
    g 4 h 1 i 0
17. a 8 b 6 c 9
    d 6 e 3 f 1
    g 7 h 0 i 10
18. a 9p b 7p
    c 9p d 10p
19. 4p
20. 5
21. 6
22. 5p, 2p, 2p
23. 8
24. 12
25. a  b 
26. 
27. Brian
28. D
29. Tea-pot
30. C
31. 7
32. Toby
33. Autumn
34. Friday
35. 7 o'clock
36. 8
37. a circle b triangle
    c square d rectangle
38. a 2 b 3
    c 1 d 5
39. a B, D, E b C c A
40. cube
41. a sphere b cylinder
    c cuboid d cone
42. 8
43. b, c, e
44. a Brad b Brian
    c Ben d Brian
45. a blue b yellow c green
46. a cat b 4
    c 1 d 3
47. 

Answers to Chapter 1

Exercise 1 page 11

1. a 32 b 46 c 29
   d 83 e 55 f 80
   g 17 h 70 i 99
2. a 125 b 364 c 781
   d 472 e 866 f 917
   g 430 h 610 i 708
   j 999
3. a sixty seven
   b forty two
   c thirty five
   d twenty eight
   e eighty
   f seventy seven
   g one hundred and thirty five
   h three hundred & twenty six
   i nine hundred & seventy nine
   j four hundred aand two
   k five hundred and ten
   l six hundred
4. one hundred and twenty three
5. 201
6. a 39 b 56 c 18
   d 70 e 93 f 104
   g 268 h 710 i 988
   j 590 k 400 l 1000
7. a 42 b 66 c 85
   d 91 e 70 f 49
   g 455 h 528 i 730
   j 419 k 849 l 699
8. 226
9. a 17, 26, 43, 59
   b 47, 58, 67, 85, 99
   c 55, 58, 60, 61, 64
   d 159, 166, 170, 185, 188
   e 199, 206, 299, 352, 417
   f 295, 367, 404, 524, 572
   g 219, 478, 655, 700, 903
   h 358, 385, 538, 835, 853
10. a 42, 37, 26, 18
    b 63, 59, 44, 33, 21
    c 167, 130, 124, 119, 108
    d 381, 240, 101, 99, 95
    e 830, 803, 800, 798, 789
    f 741, 714, 417, 174, 147
11. a Aunt Nan
    b Grandma White
12. a 13 b 97 c 102
    d 132 e 141 f 369
    g 379 h 602 i 612
    j 627
13. a 15 b 56 c 199
14. 583
15. three hundred and one
16. 127 metres
17. 36 kilograms

Exercise 2 page 15

1. 

2. a 1 ten, 8 units
   b 3 ten, 2 units
   c 7 ten, 8 units
   d 4 ten, 3 units
   e 5 ten, 6 units
   f 9 ten, 0 units
   g 9 ten, 9 units
   h 8 ten, 1 units
3. a 4 b 6
4. a 7 b 5

5 2 tens, 5 units

6. a 3 hundreds, 2 tens, 6 units
   b 5 hundreds, 6 tens, 9 units
   c 4 hundreds, 0 tens, 3 units
   d 7 hundreds, 9 tens, 9 units
   e 6 hundreds, 5 tens, 0 units
7. a 3 hundreds, 8 tens, 7 units
   b 6 hundreds, 2 tens, 6 units
   c 5 hundreds, 0 tens, 8 units
   d 9 hundreds, 1 tens, 0 units
   e 2 hundreds, 6 tens, 9 units
   f 5 hundreds, 0 tens, 0 units
   g 2 hundreds, 8 tens, 3 units
   h 4 hundreds, 4 tens, 4 units
8. a 4 b 7 c 3
9. a 2 pound coins, 3 ten pences
   b 5 pound coins, 2 ten pences
   c 8 pound coins, 5 ten pences
   d 9 pound coins, 5 ten pences
   e 7 pound coins, 7 ten pences
   f 6 pound coins, 8 ten pences
   g 4 pound coins, 0 ten pences
   h 3 pound coins, 0 ten pences
10. a 153 b 236 c 580
    d 461 e 25 f 140
    g 362
11. £3·57
12. £5·84

Exercise 3 page 18

1. 58 lies between 50 and 60
   58 is closer to 60 than to 50
   58, to the nearest 10, is 60
2. a 30 b 30 c 70
   d 90 e 20 f 50
   g 80 h 50 i 130
   j 180 k 250 l 290
3. a 40 + 50 = 90
   b 30 + 40 = 70
   c 60 + 20 = 80

Answers to Chapter 2

Exercise 1 page 21

1. a yes b no c yes
   d no e yes f yes
2. a, b, c, d, g, h, i
4. a, b, c, d, e, g, i
5. C
6. G
7. Q

Exercise 2 page 25

1. a, b, c, e
2. a 2 b 4 c 0

Answers to Chapter 3

Exercise 1 page 27

1. a 46 b 28 c 59
   d 29 e 17 f 38
   g 96 h 58 i 26
   j 15 k 35 l 58
2. a 49 b 47 c 19
   d 97 e 19 f 28
   g 38 h 89
3. 49p
4. 39p
5. 18
6. 28
7. 78
8. a 29 b 35 c 27
   d 27 e 65 f 48
   g 58 h 89 i 79
   j 59 k 87 l 89
9. a 27 b 38 c 39
   d 79 e 64 f 77
   g 98 h 99
10. 76
11. 57
12. 37
13. 49
14. 39

Exercise 2 page 31

1. a 51 b 33 c 66
   d 45 e 42 f 93
   g 35 h 52 i 52
   j 42 k 91 l 58
2. a 57 b 94 c 72
   d 61 e 72 f 62
   g 40 h 70
3. 52p
4. 32
5. 32
6. 25
7. 64
8. a 81 b 61 c 80
   d 92 e 66 f 80
   g 81 h 91 i 72
   j 93 k 91 l 78
9. a 76 b 94 c 50
   d 87 e 82 f 82
   g 81 h 95
10. 84p
11. 62
12. 62
13. 77
14. a 85 b 85 c same

Exercise 3 page 35

1. a 59 b 48 c 47
   d 54 e 59 f 78
   g 59 h 61 i 43
   j 52 k 82 l 97
2. a 28 b 49 c 37
   d 79 e 41 f 65
   g 42 h 34 i 61
   j 52 k 84 l 68
3. 83

Exercise 4 page 36

1. a 74 b 152
2. a 47 b 101 c 125
   d 99 e 175 f 186
   g 183 h 191 i 176
   j 194 k 246 l 408
3. 320

Answers to Chapter 4

Exercise 1 page 38

1. a 12 b 12 c 32
   d 41 e 61 f 72
   g 93 h 20 i 61
   j 73 k 80 l 47
2. a 61 b 51 c 55
   d 92 e 82 f 62
   g 92 h 80
3. 12
4. 22
5. 21
6. 32
7. a 41 b 54 c 41
   d 22 e 64 f 32
   g 44 h 56 i 23
   j 52 k 28 l 40
8. a 72 b 22 c 24
   d 11 e 22 f 41

g 47 h 60
9. 36
10. 22
11. 44
12. 23

Exercise 2 page 42

1. a 79 b 38 c 87
   d 28 e 38 f 19
   g 48 h 8 i 15
   j 27 k 75 l 84
2. a 19 b 35 c 16
   d 89 e 35 f 38
   g 78 h 72
3. 6
4. 65
5. 23
6. 5
7. a 23 b 9 c 38
   d 59 e 19 f 15
   g 5 h 19 i 29
   j 16 k 8 l 9
8. a 69 b 29 c 19
   d 54 e 27 f 29
   g 19 h 17
9. 18
10. 6
11. a 58 b 17 c 57
12. a 55 b 26
    c 15 d 33

Exercise 3 page 46

1. a 52 b 43 c 24
   d 34 e 12 f 19
   g 38 h 64 i 30
   j 8 k 19 l 2
2. a 33 b 40 c 54
   d 31 e 24 f 43
   g 20 h 7 i 27
   j 28 k 4 l 18
3. 17

Exercise 4 page 47

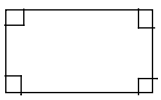
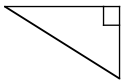
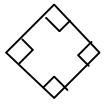
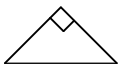
1. a 58 b 68
2. a 8 b 8 c 9
   d 30 e 55 f 39
   g 47 h 116 i 127
   j 36 k 309 l 80
3. 63

Answers to Chapter 5

Exercise 1 page 49

1. See pupils' drawings
2. a 4 b 3 c 5
   d 6 e 0 f 3
   g 8 h 6 i 4
   j 1 k 5 l 4

Exercise 2 page 51

1. a yes b yes c no
   d no e yes f no
2. a 4 b 1 c 3
3. 16
4. a  b 
   c  d 
   e  f 
5. a 2 b 2 c 2
6. a B b A c C

Answers to Chapter 6

Exercise 1 page 55

1. a 2 b 10 c 4
   d 5 e 10
2. a 35 b 58
3. a 15 b 26
4. a 10 b 15
5. a 49p b 60p c 51p
6. 7
7. 10
8. 20
9. various

Exercise 2 page 58

1. a £0·95 b £0·36 c £0·20
   d £0·13 e £0·99 f £0·10
   g £0·80 h £1·00
2. a 45p b 72p c 80p
   d 21p e 50p f 75p
   g 100p h 4p
3. a £0·71, 71p
   b £0·22, 22p
   c £0·60, 60p
   d £0·30, 30p
   e £1·56, 156p

Exercise 3 page 59

1. a £0·49 b £0·78 c £0·78
   d £0·71 e £0·92 f £0·92
   g £0·80 h £0·80 i £1·00
   j £0·86 k £1·00 l £0·98
   m £0·79 n £0·84 0 £0·81
2. a £0·22 b £0·15 c £0·30
   d £0·22 e £0·12 f £0·10
   g £0·30 h £0·15 i £0·17
   j £0·18 k £0·18 l £0·09
   m £0·52 n £0·27 o £0·24
3. a £0·98 b £0·81 c £0·52
4. a £0·66 b £0·58 c £0·15
5. a £0·99 b £0·93 c £0·33
   d £0·20 e £0·06 f no
6. a £0·02 b £0·25 c £0·34
   d £0·19 e £0·32 f £0·86
   g yes h yes i £0·05
   j £0·19 k 7 l £2·17

Answers to Chapter 7

Exercise 1 page 65

1. a 10 b 8 c 6
   d 12 e 14 f 2
   g 20 h 18 i 16
2. a 4 b 2 c 0
   d 9 e 1 f 8
   g 7 h 6 i 5
3. a 8 b 16 c 10

Exercise 2 page 66

1. a 64 b 88 c 42
   d 70 e 52 f 34
   g 146 h 136 i 170
2. a 26 b 84 c 28
   d 50 e 94 f 38
   g 102 h 124 i 154
3. a 64 b 24 c 74
   d 96p e £1·96
4. a 26 b 88 c 56
   d 70 e 144 f 190

Exercise 3 page 69

1. a 15 b 12 c 9
   d 18 e 21 f 3
   g 30 h 27 i 24
2. a 4 b 2 c 10
   d 9 e 1 f 8
   g 7 h 6 i 5
3. a 12 b 18
   c 27 d 21
4. a 69 b 36 c 60
   d 45 e 72 f 105
   g 132 h 153 i 195
5. a 39 b 93 c 33
   d 48 e 72 f 87
   g 114 h 126 i 264
6. a 33 b £1·80 c 96

Exercise 4 page 71

1. a 20 b 16 c 12
   d 24 e 28 f 4
   g 40 h 36 i 32
2. a 4 b 2 c 10
   d 9 e 1 f 8
   g 7 h 6 i 5
3. a 48 b 80 c 56
   d 72 e 96 f 144
   g 124 h 172 i 220
4. a 44 b 84 c 68
   d 108 e 52 f 120
   g 188 h 348 i 304
5. a 88 b £2·56
   c 332 d 176

Exercise 5 page 73

1. a 25 b 20 c 15
   d 30 e 35 f 5
   g 50 h 45 i 40
2. a 5 b 2 c 10
   d 9 e 1 f 8
   g 7 h 6 i 3
3. a 55 b 80 c 95
   d 105 e 155 f 210
   g 185 h 280 i 390
4. a 40 b 85 c 115
   d 165 e 150 f 210
   g 265 h 355 i 200
5. a 65 b £1·70
   c 285 d 410

Exercise 6 page 75

1. a 50 b 40 c 30
   d 60 e 70 f 100
   g 0 h 90 i 80
2. a 5 b 2 c 0
   d 9 e 1 f 8
   g 7 h 6 i 3

Exercise 7 page 76

1. a 140 b 230 c 520
   d 200 e 170 f 1210
   g 2170 h 1060 i 2300
   j 2000 k 3010 l 1900
2. a 410 b 160 c 220
   d 760 e 400 f 200
   g 700 h 900 i 1220
   j 2310 k 4010 l 5000
3. a 76 b 20 c 103
   d 90 e 150 f 300
4. a 20 b 170 c 140
   d 2450 e 360

Exercise 8 page 78

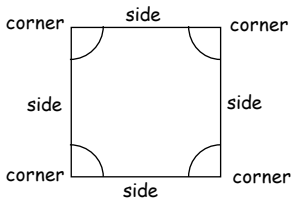
1. a 20 b 70 c 27
   d 32 e 96 f 44
   g 312 h 693 i 128
   j 112 k 210 l 1845
2. a 475 b 364
3. a 40, 40, both same answer
   b 128, 128, both same answer.

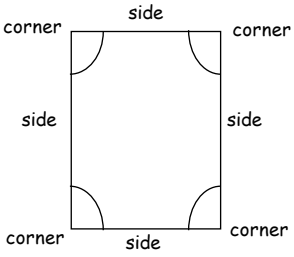
Answers to Chapter 8

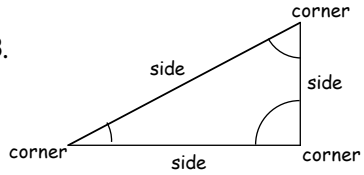
Exercise 1 page 80

1. Square
2. Rectangle
3. Triangle
4. Circle
5. a 6 b 4 c 3
   d 4 e 2 f 2
6. a Circle b Triangle
   c Rectangle
   d Triangle
   e Triangle, square
   f Circles
   g Rectangles
   h Squares
7. 2 squares, 4 rectangles, 1 circle and 1 triangle.

Exercise 2 page 82

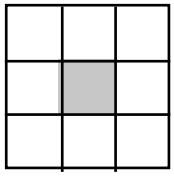
1. 

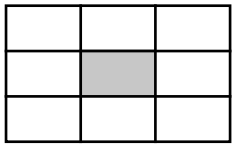
2. 

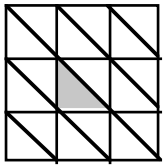
3. 

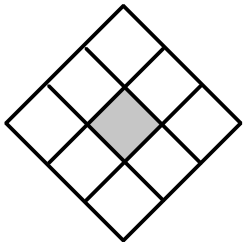
4 a 1 b 0 c 0
5. a 4 b 4 c 4
6. a 4 b 4 c 4
7. a 3 b 3 c 3
8. a 5 b 5
   c 5 d Pentagon
9. a 6 b 6
   c 6 d Hexagon
10. a 7 b 7 c 7
11. a 5 b 5 c 5
12. a B,C,E b A,H c F
    d D e G
13. Various

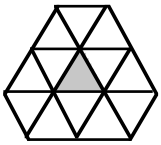
Exercise 3 page 86

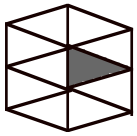
1. Yes
2. No
3. Yes
4. a Yes b Yes c No
   d Yes e No
5. 

6. 

7. 

8. 

9. 

10. 

Answers to Chapter 9

Exercise 1 page 91

1.	a	2	b	3	c	4
	d	5	e	6	f	7
	g	8	h	9	i	10
2.	a	6	b	10	c	16
	d	20	e	12	f	14
3.	a	3	b	5		
	c	7	d	2		

Exercise 2 page 92

1.	a	12	b	14	c	23
	d	24	e	33	f	32
	g	41	h	44	i	31
	j	43	k	23	l	13
2.	a	24	b	£12		

Exercise 3 page 93

1.	a	4r1	b	2r1	c	1r1
	d	3r1	e	5r1	f	8r1
	g	9r1	h	6r1		
2.	a	11r1	b	23r1	c	32r1
	d	43r1	e	12r1	f	40r1
	g	31r1	h	44r1		
3.	a	10r1	b	13r1	c	34r1
	d	41r1	e	14r1	f	21r1
	g	40r1				

Exercise 4 page 95

1.	a	19	b	25	c	36
	d	47	e	17	f	35
	g	26	h	48		
2.	a	15	b	26		
	c	39	d	45		
3.	a	28r1	b	19r1	c	35r1
	d	46r1	e	15r1	f	27r1
	g	36r1	h	49r1		
4.	a	29r1	b	18r1	c	9r1
5.	a	9	b	24	c	32r1
	d	38r1	e	10r1	f	43
	g	14r1	h	47r1		

Exercise 5 page 98

1.	a	2	b	3	c	6
	d	5	e	4	f	7
	g	8	h	9	i	10
2.	a	9	b	18	c	21
	d	15	e	30	f	24
3.	a	3	b	5		
	c	4	d	6		
4.	a	10	b	13	c	9
	d	30	e	22	f	11
	g	20	h	32	i	33
	j	23	k	31	l	21
5.	a	£11	b	23		
	c	13	d	31		

Exercise 6 page 100

1.	a	3r1	b	3r2	c	5r2
	d	6r1	e	2r1	f	1r2
	g	4r1	h	7r2	i	8r1
2.	a	10r1	b	11r2	c	20r2
	d	11r1	e	22r2	f	20r1
	g	31r2	h	12r1	i	21r1
	j	32r1	k	22r1	l	30r1
3.	a	12r1	b	21r2		
	c	20r1	d	31r2		
4.	a	7	b	9	c	15
	d	16	e	17	f	18
	g	25	h	24	i	26
	j	27	k	28	l	29
5.	a	15	b	29		
	c	5	d	27		
6.	a	14r2	b	17r2	c	6r1
	d	3r2	e	4r2	f	9r1
	g	15r2	h	16r2	i	25r2
	j	28r2	k	19r2	l	29r1
7.	a	29r2	b	8r2	c	28r2
	d	3r2	e	11r1	f	19r1
8.	a	9	b	7r1	c	9r2
	d	10	e	11r1	f	13
	g	13r2	h	15r2	i	16r2
	j	17r2	k	19	l	19r2
	m	20	n	20r2	o	22r1
	p	23r1	q	24	r	25
	s	26r1	t	27	u	28
	v	29r2	w	30r1	x	32r1

Exercise 7 page 104

1.	a	2	b	3	c	6
	d	5	e	4	f	7
	g	8	h	9	i	10
2.	a	12	b	24	c	28
	d	20	e	40	f	32
3.	a	7	b	10	c	8
	d	3	e	6		
4.	a	10	b	11	c	12
	d	21	e	22	f	20
5.	a	£11	b	12 seconds		
	c	21	d	£20		

Exercise 8 page 107

1.	a	3r3	b	2r3	c	2r1
	d	1r3	e	5r1	f	1r1
	g	2r2	h	4r1	i	4r3
2.	a	10r1	b	10r3	c	11r1
	d	12r1	e	20r1	f	20r3
	g	21r1	h	22r1		
3.	a	4r2	b	11r2		
	c	20r2	d	21r3		
4.	a	4	b	6	c	9
	d	14	e	13	f	16
	g	15	h	19	i	23
	j	24	k	18	l	17
5.	a	19	b	16		
	c	7	d	13		
6.	a	15r3	b	13r2	c	17r3
	d	13r1	e	18r2	f	23r3
	g	12r3	h	24r1	i	24r3
	j	7r1	k	14r1	l	15r1

7. a 16r2 b 18r3
c 19r3 d 23r1

8. a 4r3 b 6r1 c 8r2
d 9r3 e 11 f 11r3
g 13 h 14r2 i 15r3
j 17 k 18r1 l 19r1
m 21 n 21r3 o 22r3
p 23r3

Exercise 9 page 110

1. a 4 b 6 c 7
d 5 e 3 f 8
g 11 h 9 i 10
2. a 15 b 30 c 35
d 25 e 50 f 40
3. a 8 b 3 c 9
d 10 e 11 f 4

Exercise 10 page 112

1. a 2r1 b 3r2 c 4r1
d 1r3 e 3r3 f 1r4
g 1r1 h 2r3 i 3r4
2. a 10 b 11r1 c 10r3
d 11r2 e 11r3 f 11
g 10r2 h 11r4
3. a 10r1 b 10r4 c 11r4
4. a 8 b 14 c 15
d 11 e 12 f 17
g 9 h 10 i 16
j 13 k 18 l 20
5. a 7 b 19
c 18 d 14
6. a 7r2 b 8r1 c 18r4
d 10r4 e 17r3 f 12r3
g 13r4 h 14r2 i 11r1
j 9r3 k 19r1 l 19r4
7. a 13r1 b 16r2 c 7r3
d 15r4 e 6r1 f 15r3
g 11r4
8. a 3r4 b 7r3 c 13r2
d 16r1 e 12r2 f 15r1
g 18r3 h 5r4 i 6r4
j 17 k 14 l 19r4
m 11 n 14r3 o 12r4
p 18r1 q 8r3 r 13r3
s 17r3 t 13

Exercise 11 page 116

1. a 7 b 4 c 8
d 9 e 6 f 3
g 2 h 5 i 10
2. a 30 b 60 c 70
d 50 e 90 f 80
3. a 3 b 7
c 9 d 10
4. a 3 b 5 c 8
d 10 e 12 f 17
g 20 h 23 i 35
j 40 k 45 l 50

Answers to Chapter 10

Exercise 1 page 119

1. a 3 b 3 c 1
d 2 e 7 f 8
g 5 h 0 i 7
j 13 k 10 l 9
2. a 1 b 3 c 6
d 6 e 0 f 7
g 8 h 7 i 12
j 1 k 6 l 3

Exercise 2 page 120

1. a 3 b 3 c 8
d 5 e 4 f 5
g 2 h 10 i 4
j 11 k 15 l 5
m 6 n 8 o 4
p 10 q 11 r 12
2. a 6 b 10 c 9
d 3 e 6 f 5
g 14 h 11 i 6
j 11 k 20 l 17
m 6 n 11 o 5

Exercise 3 page 121

1. a - b + c +
d + e - f -
g - h + i -
j + k + l -
2. a - b + c +
d - e + f -
g - h + i +

Exercise 4 page 122

1. 5
2. 2
3. 4
4. 6
5. 11
6. 6
7. 7

Answers to Chapter 11

Exercise 1 page 125

1. a 5 b 3 c 4
d blue e 3 f 3
g 15
2. a

Colour	Tally	Total
Pink	|||	3
Red	|	1
Black	||||||	6
Blue	||||	4
Green	||	2

b 16 pupils

3. a

To school	Tally	Total
Car	||||	4
Taxi	|	1
Bus	|||||	5
Walk	||||||||	8
Train	||	2

b 6 c 15

4. a

Age	Tally	Total
Six	||||	4
Seven	|	1
Eight	|||||	5
Nine	||||||||	8
Ten	|||	3
Eleven	|	1
Twelve	||	2

b 1 c 2 d 14

5. a

Colour	Tally	Total
Blonde	||	2
Red	|||	3
Black	|||	3
DarkBrown	|||	3
LightBrown	|||||	5

b Light brown
c Blonde d 16 e 13

6. a

Drink	Tally	Total
Tea	||||	4
Orange	𝍸	5
Water	||	2
Irn Bru	𝍸 |	6
Coffee	|||	3

b Irn Bru c Water
d 4 e 20

7. a

Grade	Tally	Total
A	||||	4
B	𝍸 𝍸	10
C	𝍸 ||	7
D	||	2
E		0
F	|	1

b 10 c 0
d 3 f 24

8. a 𝍸 b 𝍸 𝍸 c \|\|\|\|
d 𝍸 𝍸 𝍸 e \|\|
f 𝍸 \|
g 𝍸 𝍸
h 𝍸 𝍸 𝍸 𝍸

9. a 7 b 10 c 13
d 18 e 37

10. a 𝍸 b 𝍸 𝍸
c 𝍸 𝍸 𝍸 𝍸
d 𝍸 𝍸 𝍸
e 𝍸 𝍸 𝍸 \|\|\|\|
f 𝍸 𝍸 𝍸 𝍸 𝍸
g 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 \|
h 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 \|\|\|\|

11.

Day	Tally	Total
Mon	||||	4
Tue	𝍸 ||	7
Wed	||||	4
Thu	𝍸	5
Fri	𝍸 𝍸	10

Exercise 2 page 130

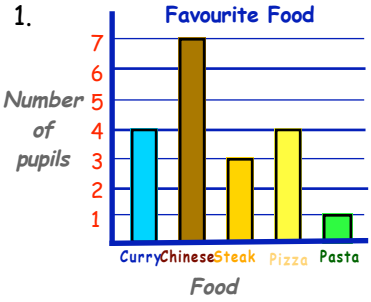
1. a 3 b 6
c 17 d 40
2. a 3pm b 4pm c Javelin
3. a 7 b 14
c Jane ate 1 more.
4. a Super-Boy
b Simpson
c 5pm, BBC2
5. a £5 b £15
c £24 d Ben, £2 more

Exercise 3 page 132

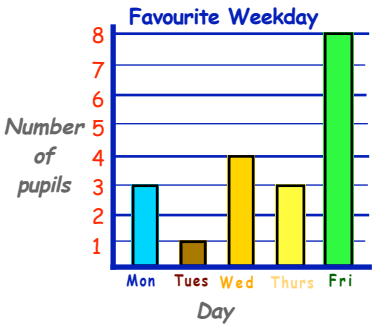
1. a 3 b 1 c 6
d 2 e 5 f water
g lime h 2 i 17
j 11
2. a 6 b 3 c 7
d 2 e 0 f black
g 18
3. a 7 water, 3 cola, 4 orange, 6 lemon, 2 apple.
b water c apple d 5
e 1 f 22
4. a 15 b 14 c 9
d 11 e 12
5. a Spain b France
c 19 d 45

Exercise 4 page 135

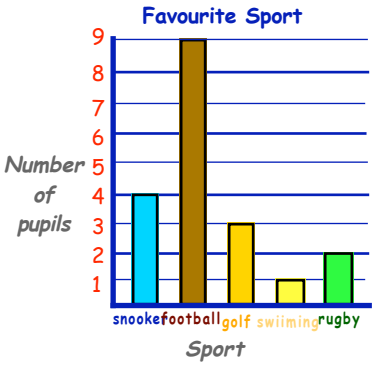
1.



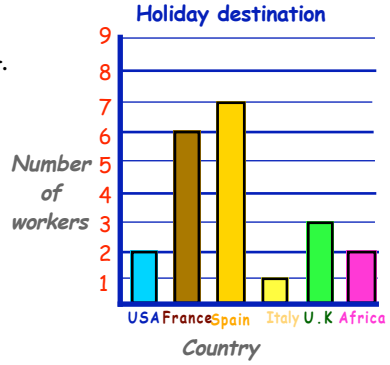
2.



3.



4.



Answers to Chapter 12

Exercise 1 page 139

1. Pupils practice
2. Yes
3. No
4. A, B, C, E
5. a No b 1
6. a No b 2
7. a No b 2
8. a No b more than

Exercise 2 page 142

1. pupils practice
2. Yes
3. No
4. A, B, C, D
5. $\frac{1}{4}$
6. a No b Nick c Ming
7. a No b D c C
8. a $\frac{1}{4}$ b two $\frac{1}{4}$'s or $\frac{1}{2}$
9. a $\frac{1}{4}$ b two $\frac{1}{4}$'s or $\frac{1}{2}$

Exercise 3 page 145

1. 10p
2. a 6p b 8p c 14p
3. 4
4. 6
5. a 7 b 8 c 2
d 5 e 1 f 4
g 6 h 0 i 3
6. a 10 b 3 c 7
d 9 e 1 f 5
g 8 h 4 i 6
j 0

7. a 7 b 6 c 5
d 9 e 4 f 0
g 10 h 8
8. a 20 b 14 c 16
d 2 e 6 f 18
g 8 h 0
9. a 9p each b 4 c 8
d 7 e 5

Exercise 4 page 148

1. 7p
2. a 4p b 5p c 9p
3. 2
4. 3
5. a 3 b 5 c 1
d 8 e 10 f 10
g 9 h 0 i 4
6. a 2 b 8 c 1
d 5 e 0 f 3
g 6 h 4 i 7
j 10
7. a 7 b 8 c 2
d 9 e 5 f 6
g 10 h 4
8. a 12 b 20 c 24
d 28 e 32 f 40
g 4 h 0
9. a 10p each b £9
c 6 d 8 e 1

Answers to Chapter 13

Exercise 1 page 152

1. a Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
   b January, February, March, April, May, June, July, August, September, October, November, December.
   c Spring, Summer, Autumn, Winter.
2. Monday, Tuesday, Wednesday, Thursday, Friday.
3. a Thursday b Friday
   c Saturday
   d Wednesday, Friday.
4. a April b August
   c May, July
   d December, February
5. a Autumn b Winter
6. a December b November
   c October d various
7. a Friday b Saturday
   c Sunday d Wednesday
8. a April b June
   c October d July
   e October f June
   g December
9. a Sunday b Thursday
   c Wed'day d Monday
10. a August b May
    c December d October

Exercise 2 page 155

1. a 2 o'clock b 8 o'clock
   c 1 o'clock d 11 o'clock
   e 9 o'clock f 5 o'clock
   g 6 o'clock h 10 o'clock
   i 12 o'clock
2. a half past 3
   b half past 1
   c half past 8
   d half past 7
   e half past 10
   f half past 5
   g half past 11
   h half past 6
   i half past 12
3. a quarter past 5
   b quarter past 10
   c quarter past 12
   d quarter past 2
   e quarter past 11
   f quarter past 12
   g quarter past 6
   h quarter past 8
   i quarter past 9
4. a quarter past 7
   b quarter to 6
   c quarter past 2
   d quarter past 12
   e quarter to 4
   f half past 9
   g quarter past 9
   h quarter to 12
   i quarter past 5
   j 12 o'clock
   k quarter to 11
   l half past 6
   m quarter past 3
   n half past 12
   o half past 11

Exercise 3 page 159

1. a half past 4
   b quarter past 5
   c quarter to 2
   d half past 8
   e quarter past 9
   f quarter to 7
   g half past 9
   h quarter past 1
   i quarter to 6
2. a 5:45 b 7:30 c 1:45
   d 7:00 e 11:30 f 12:00
   g 11:15 h 7:45 i 10:30
3. a 9:30 b 1:15 c 8:45
   d 3:15 e 11:45 f 6:30

Exercise 4 page 161

1. a 3 b 5
   c 3 d 6
2. a 2 b 5 c 5
   d 4 e 7 f 3
3. a half past 1
   b 15 minutes
   c quarter past 2
   d 3 o'clock

Answers to Chapter 14

Exercise 1 page 163

1. a Bill b Jon c Ella
   d Jon e Bill
2. a May b Anne c Bill
   d Zak e Zak f Ali
   g May h Joe i Ali
3. a Plane b Top
   c Teddy d Train

Exercise 2 page 165

1. 3
2. 6
3. 12
4. 12
5. 8

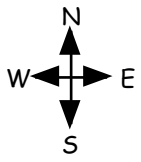
Exercise 3 page 166

1. 12
2. 9
3. 12
4. 3
5. 11
6. 2

Exercise 4 page 167

1. Take 3 steps forward, turn left take 1 step forward, turn right, take 4 steps forward.
2. a Take 2 steps forward, turn left, take 1 step forward, turn right, take 2 steps forward, turn left, take 2 steps forward, turn right, take 3 steps forward.
   b Take 3 steps forward, turn left, take 2 steps forward, turn right, take 2 steps forward, turn left, take 1 step forward, turn left, take 1 step forward, turn right, take 2 steps forward.
3. Take 3 steps forward, turn right, take 1 step forward, turn left, take 4 steps forward.
4. a Take 3 steps forward, turn right, take 2 steps forward, turn left, take 4 steps forward.
   b Take 2 steps forward, turn right, take 2 steps forward, turn left, take 3 steps forward, turn left, take 2 steps forward, turn right, take 2 steps forward.
   c Take 2 steps forward, turn left, take 1 step forward, turn right, take 2 steps forward, turn left, take 2 steps forward, turn right, take 3 steps forward.
   d Take 2 steps forward, turn right, take 2 steps forward, turn left, take 1 step forward, turn right, take 1 step forward, turn left, take 2 steps forward, turn left, take 2 steps forward, turn right, take 2 steps forward.

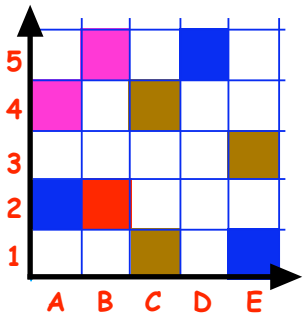
Exercise 5 page 169

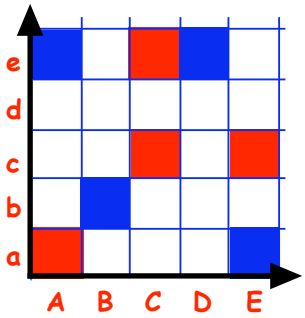
1. 

2. East
3. South
4. South
5. South

Exercise 6 page 170

1. a Ac b Cd c Da
   d Ee e Bb
2. a Db b Ca c Ae
   d Bc e Ed
3. a Car b Truck c Plane
   d Ship e Train
   f Motorbike
   g Bc, Cc, Dc
4. a B5 b A3
   c D5 d E1
5. a Cows A1, Hens A2, Pigs A5, Ducks B1, Bulls B2, Horses B4, Geese B5, Turnip D2, Potato E1, Corn E4, Wheat E5.
   b Pathway C1, C2, C3, C4, C5, A3, B3, D3, E3.
   c Empty A4, D1, D4, D5, E2.

6. 

7. 

8. various answers

Answers to Chapter 15

Exercise 1 page 176

1. a ruler b tape c tape
   d ruler e tape f ruler
2. a 7cm b 12cm c 3cm
   d 9cm e 15cm f 14cm
3. a 7cm b 9cm c 4cm
   d 15cm e 8cm f 13cm
   g 14cm
4. a 8cm b 4cm c 2cm
   d 5cm e 14cm
5. pupils own lines
6. a 2cm by 2cm
   b 5cm by 3cm lines
   c 16cm by 1cm lines
   d 10cm, 10cm and 3cm lines
7. see pupils drawings
8. a 2 b 1 c 1
   d 1 e 2

Exercise 2 page 179

1. 2. 3. various answers

Exercise 3 page 180

1. a 100cm b 500cm c 800cm
   d 300cm e 900cm f 700cm
   g 600cm h 1000cm
   i 400cm j 1100cm
   k 1200cm l 1500cm
2. a 4m b 8m c 2m
   d 5m e 7m f 10m
   g 3m h 9m
3. a 1m 20cm = 120cm
   b 2m 50cm = 250cm
   c 5m 40cm = 540cm
   d 6m 90cm = 690cm
   e 1m 35cm = 135cm
   f 8m 25cm = 825cm
   g 4m 5cm = 405cm
   h 8m 7cm = 807cm
4. a 2m 10cm = 2 metres 10 centimetres
   b 3m 14cm = 3 metres 14 centimetres
   c 6m 84cm = 6 metres 84 centimetres
   d 4m 90cm = 4 metres 90 centimetres

e 5m 36cm = 5 metres 36 centimetres
f 7m 61cm = 7 metres 61 centimetres
g 3m 1cm = 3 metres 1 centimetres
h 9m 5cm = 9 metres 5 centimetres

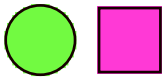
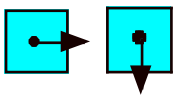
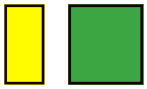
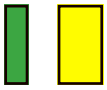
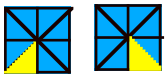
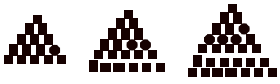
5. 9 metres 50 centimetres
6. 4 metres 8 centimetres
7. 675 centimetres
8. 805 centimetres
9. 532 centimetres
10. 201 centimetres
11. a 900 centimetres
    b 9 metres

Exercise 4 page 183

1. a 2cm b 5cm c 24cm
   d 26cm e 46cm f 48cm
   g 49cm h 31cm i 33cm
   j 36cm k 39cm l 40cm
2. a 5cm b 6cm c 15cm
   d 18cm e 31cm f 32cm
   g 34cm h 53cm i 56cm
   j 58cm k 60cm l 63cm
3. a 10cm b 5cm

Answers to Chapter 16

Exercise 1 page 189

1. a 
   b 
   c 
   d 
   e 
2. a 
   e 
   f 
   g 
   h 
3. various answers

Exercise 2 page 188

1. a b c d e f g h i j k l m
   n o p q r s t u v w x y z.
2. a LM b x, y c FE
   d w, y e t,s f P, S
   g FU, GT
3. a C, F b y, u, t c f, j, k
   d A, C, M
4. various

Exercise 3 page 189

1. a 12, 13 b 30, 31 c 19, 18
   d 14, 16 e 25, 30 f 66, 77
   g 18, 21 h 8, 4
2. a 15, 25, 30
   b 4, 12, 14
   c 20, 30, 60
   d 3, 6, 18, 21
   e 20, 14
   f 27, 24, 21, 9
   g 60, 45
   h 66, 55, 44, 0
   i 80, 70
   j 20, 25, 30, 50
   k 57, 55, 49, 45, 39, 37, 35
3. a 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30
   b 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39
   c 52, 54, 56, 58, 60, 62, 64, 66, 68
   d 81, 83, 85, 87, 89, 91, 93, 95, 97, 99
   e 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
   f 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36
   g 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
   h 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60
   i 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120
4. various answers

Answers to Chapter 17

Exercise 1 page 193

1. a cube b cuboid
   c sphere d cylinder
   e cone f pyramid
2. Triangular prism
3. a cube b cylinder
   c triangular prism
   d cone e cuboid
   f pyramid g sphere
   h triangular prism
4. a cube and pyramid
   b cuboid and triangular prism
   c cylinder and cone
   d cube, cuboid and pyramid
   e 6 cylinders and cuboid
   f cuboid, cone, sphere and pyramid
   g 2 cones and cylinder

Exercise 2 page 195

1. 3 pairs of rectangles
2. 1 pair of squares and 4 rectangles
3. a 1 square and 4 rectangles
   b 1 pair of triangles and 3 rectangles
4. a cuboid b cube
   c cuboid d triangular prism
   e square pyramid
5. a 12 b 8
6. a 12 b 8
7. a 8 b 5
8. a 9 b 6

Answers to Chapter 18

Exercise 1 page 198

1. a feather b monkey
   c chair d screwdriver
   e car f leaf

2. a concrete slab
   b bowling ball
   c computer
   d fingernail
   e glass bowl
   f house phone
   g leather jacket
   h bus
3. motor mower, metal wheelbarrow, metal fork, plastic rake, clippers
4. floppy disk, computer mouse, laptop, printer, computer
5. a turnip b cauliflower
   c carrot d parsnip
6. a starwberry
   b apple

Exercise 2 page 200

1. a 2kg b 5kg
   c 40kg d 44kg
2. a 7, 4, 3 kg
   b 12, 9, 5 kg
   c 19, 16, 13 kg
   d 27, 21, 19, 6 kg
   e 38, 33, 31, 30 kg
   f 61, 52, 47, 39 kg
3. 2
4. a 1 kg b 2 kg
   c 3 kg d 4 kg
5. a 2 b 8
   c 10 d 20

6. 7. see worksheet

Exercise 3 page 202

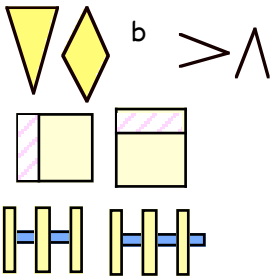
1. 1 kg
2. 23 kg
3. see worksheet

Exercise 4 page 203

1. a bath b soup spoon
   c vase d cupboard
   e fridge f cooking oven
2. golf ball
3. bus, van, car, jet-ski
4. a 3 litres
   b 5 litres
   c $1\frac{1}{2}$ litres

Answers to Chapter 19

Exercise 1 page 205

1. a eighty seven
   b three hundred and twenty six
   c five hundred and eight
   d seven hundred and ninety
2. a 73 b 617
   c 460 d 902
3. a 216 b 417
   c 366 d 440
   e 330 f 828
4. a 470, 401, 310, 306, 299, 196, 89
   b 716, 706, 704, 700, 698, 697, 688, 678
5. a  b  c 
6. a  b  c 
7. a 2 b 4
8. a 53p b various
9. a 10 b 8 c 15
10. a 10 b 48 c 50
    d 190 e 64 f 15
    g 300 h 310
11. a 98 b 81
    c 54 d 4
12. a 24 b 36 c 35
    d 16 e 70 f 9
    g 3 h 8 i 7
    j 30 k 7 l 6
13. a 168 b 120 c 730
    d 15 e 27 f 13
    g 135 h 17
14. 16p
15. a £88 b 60 g
16. a 70 b 60
    c 20 d 20
17. a 80 b 40
18. a £12 b 41g c £6
19. 51, 127, 17, 79, 395
20. a 20, 24, 28
    b 15, 18, 21
    c 50, 40, 30
    d 15, 17, 19
    e 17, 21, 25
    f 56, 54, 52
21. a 
    b
    c
    d
22. a 5 b 4 c 6
    d 5 e 17 f 15
23. a × b +
    c ÷ d -
24. a 28 b 31
    c 46 d 59
25. 1m 93cm, 115cm, 1m 7cm, 99cm, 95cm
26. a 265cm b 348cm
    c 207cm d 5m 20cm
    e 3m 9 cm
27. a 2:30 or half past 2
    b 5:45 or quarter to 6
28. a half past eight
    b quarter to one
29. May 18th, May 30th, June 24th, July 2nd
30. February, May, July, September, November
31. a square b rectangle
    c circle d triangle
32. a cube b cuboid
    c cone d cylinder
    e sphere f triangular prism
    g square pyramid
33. a 6 b 12 c 8
34. a 5 faces, 8 edges, 5 corners
    b 5 faces, 9 edges, 6 corners
35. a, b, d, e, f
36. a hut b mower
37. N
    W E
    S
38. a pig b bull
39. a, d
40. a, b, d ,e, f
41. a Nick, Mike
    b No
    c one
42. a blonde b 5 c 2

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This textbook covers the entire content of 5-14 Level B and is meant to be completed in approximately 1 to $1\frac{1}{2}$ years.
It includes a Chapter Zero, which consists of an in-depth look at every strand in Level A in preparation for a sound start to Level B.

Worksheets, in photocopiable form, are available to enhance the course.

Homework Exercises, Consolidation work and Assessments, in photocopiable form, are also available for use in class and at home.

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