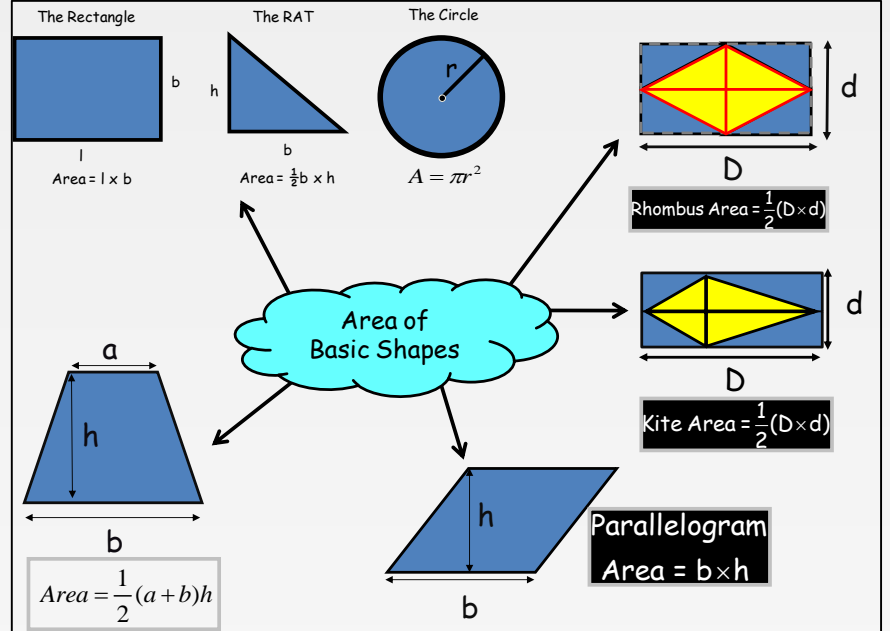


Gradient



Area of Basic Shapes

Pythagoras Theorem

Two key points when dealing with right-angled triangles
The longest side in a right-angled triangle is called The HYPOTENUSE
The HYPOTENUSE is ALWAYS opposite the right angle
 $c^2 = a^2 + b^2$
 $(xz)^2 = (xy)^2 + (yz)^2$

The cost for hiring a carpet cleaner is £30 plus £3 a day
How much will it cost to hire for a week.
 $C = 30 + 3d$
For $d = 7$
 $C = 30 + 3 \times 7 = \text{£}51$

Formulae

Mathematics N4 Lifeskills Geometry & Measure

Using Timetables

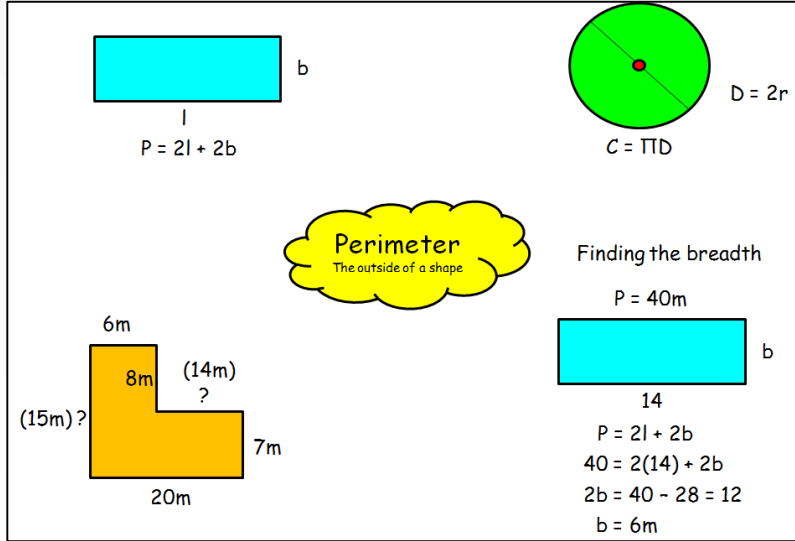
Kirkie Bus Station*	0825	0925	1025		2025	2125	2225
Bishopbriggs	0837	0937	1037	And	2037	2137	2237
Milton	0843	0943	1043	Every	2043	2143	2243
Springburn	0848	0948	1048	Hour	2048	2148	2248
Port Dundas	0854	0954	1054	Until	2054	2154	2254
George Square	0902	1002	1102		2102	2202	2302
Glasgow Bus Station*	0914	1014	1114		2114	2214	2314

How long does the first bus take from Kirkie to Glasgow.

nearest hour: 08 25 (35 mins)
hours: 09 00 (0 hrs)
What's left: 09 00 (14 mins) to 09 14

Hrs	Mins
0	35
+	14
	49

Timetables



Perimeter

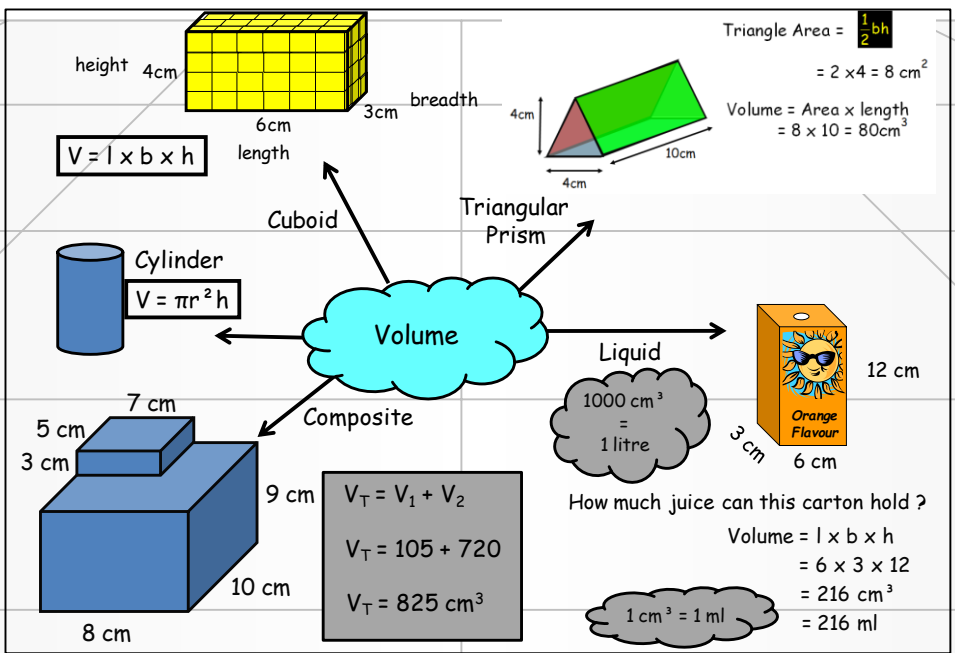
Scale Drawing

Scale Drawings

Solution Using a scale of $1cm = 2m$

Step 1: Draw line XY=3cm
Step 2: Draw a line straight up from Y.
Step 3: Measure angle 55° from X.
Step 4: Draw line from X to vertical line and mark T at crossover point.
Step 5: Measure length YT. **4.3cm**
Step 6: Multiply length YT by scale factor.
 $2 \times 4.3 = 8.6cm$

Volume



Tolerance

Tolerance is written as $(50 \pm 2) \text{ mm}$

He might be prepared to accept any bolt as long as it lies between 48mm and 52mm
This means he will accept a bolt which is within 2mm of the 50mm he asked for.
This is referred to as the TOLERANCE for the measurement.

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Gradient

Pythagoras Theorem

Area

Timetables

Formulae

Tolerance

Perimeter

Volume

Scale Drawing

Monthly Budget	
Income	Expenditure
Wages	Food
Child Benefit	Gas & Electric
Child Tax Credit	Rent
Working Tax Credit	TV Internet
	Mobile Phone
	Car Loan & Petrol
	Insurance
	Credit Card
	Clothes

Budgeting

Who gives the best value and by how much after one year?

Bank of Mr Lafferty	APR %
Bank for Money	3

$$\frac{3.5}{100} \times 3000 = \pounds 105$$

$$\frac{3}{100} \times 3000 = \pounds 90$$

Total in Bank $\pounds 3105$ Total in Bank $\pounds 3090$

Best Deal is Bank of Mr Lafferty by $\pounds 15$

APR means Annual Percentage Rate

During one month, Mikey owes $\pounds 1500$ on his Credit Card at an APR of 30%.

Assuming he does not buy anything more with his credit card, how much will he owe the bank at the end of the month.

Monthly interest : $30 \div 12 = 2.5\%$

$$\frac{2.5}{100} \times 1500 = \pounds 37.50$$

Total now owed = $\pounds 1537.50$

Change $\pounds 350$ to euro's given the exchange rate is $\pounds 1.4$ to the \pounds .

\pounds	\pounds
1	→ 1.4
350	→ $\frac{350}{1.4} = \pounds 250$

Going on holiday

Foreign Exchange

Change $\pounds 280$ to pounds given the exchange rate is $\pounds 1.4$ to the \pounds .

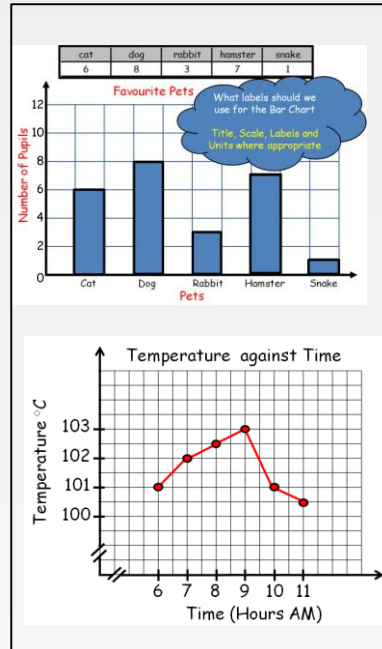
\pounds	\pounds
1	→ 1.4
$\frac{280}{1.4}$	← 200

Coming back from holiday

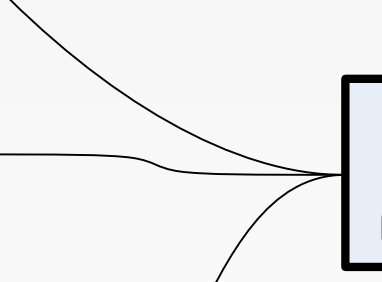
Comparing Prices

Banking

Foreign Exchange



Charts & Graphs



Mathematics N4 Lifeskills Finance & Statistics

Income

Hourly rate: How much a person is paid to do a job. Can be measured weekly, monthly or annually.

Commission: Money earned based on how much you sell. Usually expressed as a percentage.

Hourly rate: How much you get paid for an hour's work.

Adam is a joiner his hourly rate of pay is $\pounds 10.50$. He works 40 hours a week. What is his basic pay?
 $\pounds 10.50 \times 40 = \pounds 420.00$

Liam sells double glazing. He is paid a commission of 15% on any windows he sells. Last month he sold $\pounds 30,000$ worth of windows. How much commission was he paid?
 $15 \div 100 \times \pounds 30,000 = \pounds 4,500$

Wages & Salaries

- Hourly rate
- Commission
- Overtime: Extra work above your basic hours. Double time (x2), Time and a half (x1.5)
- Wage Slips

Sean the painter works for $\pounds 6.00$ per hour. His overtime rate is "Double time". What does he get paid for 4 hours overtime?
 $4 \times 2 \times \pounds 6 = \pounds 48$

Name: Bill Smith						
Income	Basic	€650.00	O/T	€54.00	Bonus	-
						Total
Deductions	Tax	€102.00	Nat Ins.	€25.00	Pension	€22.00
						Total
						NET PAY
						704.00
						149.00
						555.00

Scattergraph

Scattergraphs

Data was collected on pupils scores in Maths and Physics.

(a) Is there correlation between maths and physics scores.
Yes, a positive correlation

(b) Draw in the best-fit line.

(c) Use your line to estimate the maths score if you score 60% in physics.
About 45%

(d) If you scored 80% for maths estimate your score for physics.
100%

Comparing Data

Example:

Find the mean, median, mode and range for the set of data.

10, 2, 14, 1, 14, 7

Mean = $\frac{48}{6} = 8$

Mode = 14

Range = H - L = 14 - 1 = 13

Median = $\frac{7 + 10}{2} = 8.5$

Probability

Q. What is the chance of picking a number between 1 - 8? $P = \frac{8}{8} = 1$

Q. What is the chance of picking a number that is even? $P(E) = \frac{4}{8} = 0.5$

Q. What is the chance of picking the number 1? $P(1) = \frac{1}{8} = 0.125$

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Comparing Data

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Probability

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Income