

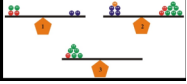




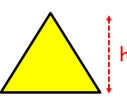
www.mathsrevision.com



Common Language and Methodology for Teaching Numeracy 3-18
St. Ninian's High School

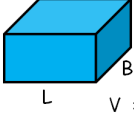
www.mathsrevision.com

Simple Areas

Area & Volume

Simple Volume



www.mathsrevision.com

e.g. 17.5% of 300

Without a calculator

10% → 300 ÷ 10 = £30
5% → 30 ÷ 2 = £15
2.5% → 15 ÷ 2 = £7.50
17.5% → £52.50

With a calculator

e.g. 19% of £60

$\frac{19}{100} \times 60 = \text{£}11.40$

Percentage out of 100

Finding Percentages

Fraction to Percentage

$\frac{3}{4} \times 100 = 75\%$

10% → ÷ 10
5% → half of 10%
1% → ÷ 100
0.5% → half of 1%
2% → twice 1%
3% → 3 times 1%

www.mathsrevision.com


Simple Percentages

Learn the following basic percentages

100%	50%	33 $\frac{1}{3}$ %	25%	20%	10%	5%	1%
1	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{100}$

www.mathsrevision.com

Counting Method



Hrs	Mins
2	20
+	10
2	30

www.mathsrevision.com

Why is this not scientific notation?

4000

11 x 10¹⁸

11 x 10¹⁹

Write out in full

4 x 10³

a x 10ⁿ

a between 1 and 10
n is positive

Science

Maths

Scientific Notation = Standard Form

LARGE numbers

SMALL numbers

0.0000006

6 x 10⁻⁷

0.5 x 10⁻⁵

5 x 10⁻⁶

Write out in full

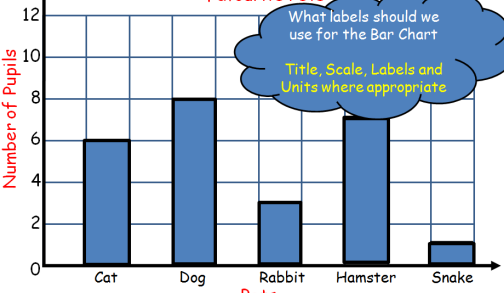
Why is this not scientific notation?

a is less than 1
a < 1

www.mathsrevision.com

cat	dog	rabbit	hamster	snake
6	8	3	7	1

Favourite Pets



Number of Pupils

Pets

What labels should we use for the Bar Chart

Title, Scale, Labels and Units where appropriate

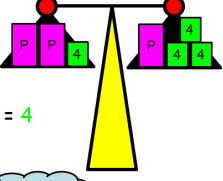
www.mathsrevision.com

Balancing Method

Lets solve it using maths.

Let P be the weigh of a big bag.

We know that a small bag = 4



Subtract 4 from each side

$$2P + 4 = P + 12$$

$$2P - 4 = P + 8$$

Subtract P from each side

$$P = 8$$

www.mathsrevision.com

Drawing Pie Charts

In a survey, people were asked to indicate which one of five musical instruments they played. The information is given in the table. Display the information in a pie chart.

Musical Instrument	Number of Pupils
Guitar	35
Violin	10
Recorder	15
Drum	5
Keyboard	25
Total	90

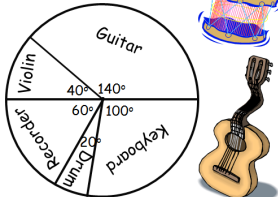
Guitar angle = $\frac{35}{90} \times 360 = 140^\circ$

Violin angle = $\frac{10}{90} \times 360 = 40^\circ$

Recorder angle = $\frac{15}{90} \times 360 = 60^\circ$

Drum angle = $\frac{5}{90} \times 360 = 20^\circ$


Keyboard angle = $\frac{25}{90} \times 360 = 100^\circ$



www.mathsrevision.com

Units of Length

Converting Measurements



Convert 34cm to mm

$$34 \times 10 = 340 \text{ mm}$$

Convert 50cm to m

$$50 \div 100 = 0.5 \text{ m}$$

Kilometres (km)

metres (m)

centimetres (cm)

millimetres (mm)

×1000

×100

×10

÷1000

÷100

÷10

www.mathsrevision.com

Perimeter

Calculate the perimeter of the rectangle below.

Perimeter = $6 + 3 + 6 + 3 = 18\text{cm}$

www.mathsrevision.com

Area of a Rectangle

Find the area of the rectangle.

$B = 2\text{cm}$
 $L = 9\text{cm}$

Area = Length \times Breadth
 $A = L \times B$
 $A = 9 \times 2$
 $A = 18\text{cm}^2$

www.mathsrevision.com

Type of Angles

Acute less than 90°

Horizontal Right - Angle exactly 90°

Obtuse Between $90^\circ - 180^\circ$

Straight Line Angle exactly 180°

reflex over 180° less than 360°

www.mathsrevision.com

Naming Angles

Type of angle is acute
Name of angle is $\angle ABC$

Type of angle is obtuse
Name of angle is $\angle ZYX$

MIDDLE LETTER IS ALWAYS WHERE THE ANGLE IS
ALWAYS 3 CAPITAL LETTERS

www.mathsrevision.com

Find Missing Angle

Two angles making a straight line add to 180° (Supplementary angles)

angles opposite each other at a cross are equal.

Angles round a point always add up to 360°

www.mathsrevision.com

Ratio

Bill and Ben share a raffle win of $\pounds 400$ in the ratio 3:5. How much does each get?

Step 1: Since the ratio is 3:5, there are : $3+5 = 8$ shares

Step 2: Each share is worth : $\frac{400}{8} = 50$

Step 3: Bill gets $3 \times 50 = \pounds 150$
Ben gets $5 \times 50 = \pounds 250$

Check! $150 + 250 = 400$

www.mathsrevision.com

Coordinates

Along 1 Up 1 (1,1)
 Along 2 Up 4 (2,4)
 Along 0 Up 2 (0,2)
 Along 3 Up 0 (3,0)

www.mathsrevision.com

Decimal Numbers

Multiplication & Division by a Single Digit

When multiplying by a single digit the decimal point always stays in line.

Calculate 23.68×7

When dividing by a single digit the decimal point always stays in line.

Calculate $17.16 \div 6$

www.mathsrevision.com

Decimal Numbers

Add and Subtract Decimals

When you add or subtract decimal numbers, it is important to line-up the decimal points.

Calculate $7.8 + 0.92$

Calculate $4 - 0.84$

www.mathsrevision.com

Face Edges and Vertices

Cylinder
3 faces
2 edges
0 Vertices

Triangular Prism
5 faces
9 edges

Cone
2 faces
1 edges
1 Vertices

Sphere
1 faces
0 edges
0 Vertices