



Maths facts for SATS



Standard units of length, mass, volume and time

	Length	Area	Volume	Mass
Standard units	kilometre = km metre = m centimetre = cm millimetre = mm	Square kilometres = km ² Square metres = m ² Square centimetres = cm ² Square millimetres = mm ²	litre = l millilitre = ml Cubic metre = m ³ Cubic centimetre = cm ³ Cubic millimetre = mm ³	tonne = t Kilogram = kg gram = g milligram = mg
Equivalencies	1km = 1000m, 1m = 100cm = 1000mm, 1cm = 10mm,		1 l = 1000ml 1 ml = 1 cm ³	1t = 1000kg, 1kg = 1000g, 1g = 1000mg

Metric and Imperial units

1 inch = 2.54cm
1cm = 0.39 inch

1 pound = 454g
1kg = 2.2lb

1 pint = 568ml
1 litre = 1.76 pints

Prime numbers

Numbers that only have a single pair of factors:

2, 3, 5, 7, 11, 13, 17, 19, ...

Square numbers and cube numbers

Square numbers are numbers that can be made by multiplying the same two whole numbers together e.g. 9 is square because it can be thought of as 3 x 3. The square numbers are:

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225,

The notation for square is a small raised 2, like this ²

Cube numbers are numbers that can be made by multiplying the same three whole numbers together e.g. 27 is cube because it can be thought of as 3 x 3 x 3. The cube numbers are:

1, 8, 27, 64, 125, 216, 343, 512, 729, 1000, ...

The notation for cube is a small raised 3, like this ³

Equivalent fractions, decimals and percentages

$$\frac{1}{2} = 0.5 = 50\%$$

$$\frac{1}{4} = 0.25 = 25\%$$

$$\frac{1}{5} = 0.2 = 20\%$$

$$\frac{1}{10} = 0.1 = 10\%$$

$$\frac{2}{4} = \frac{1}{2} = 0.5 = 50\%$$

$$\frac{2}{5} = 0.4 = 40\%$$

$$\frac{3}{10} = 0.3 = 30\%$$

$$\frac{3}{4} = 0.75 = 75\%$$

$$\frac{3}{5} = 0.6 = 60\%$$

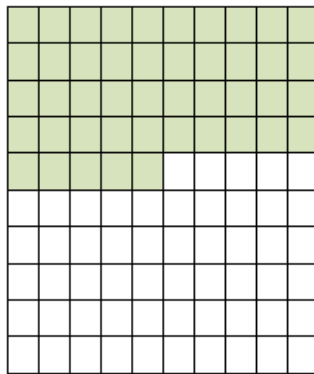
$$\frac{7}{10} = 0.7 = 70\%$$

$$\frac{4}{5} = 0.8 = 80\%$$

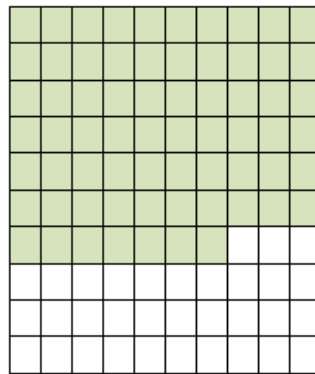
$$\frac{9}{10} = 0.9 = 90\%$$

Know what a percentage is.

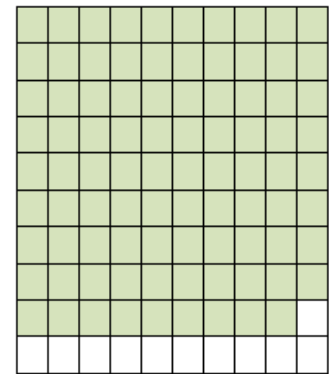
Percentage means "per 100" so 50% means 50 per 100



$$\begin{aligned} &= 45\% \\ &= \frac{45}{100} \\ &= 0.45 \end{aligned}$$



$$\begin{aligned} &= 67\% \\ &= \frac{67}{100} \\ &= 0.67 \end{aligned}$$



$$= 89\%$$

Time

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

1 year = 365 days

1 year = 52 weeks (plus 1 day)

1 year = 12 months

9am, 2:15pm – 12 hour clock

09:00, 14:15 – 24 hour clock

02:34.45 – two hours, thirty four minutes and forty five hundredths of a second

Days: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.

Months: January, February, March, April, May, June, July, August, September, October, November, December.

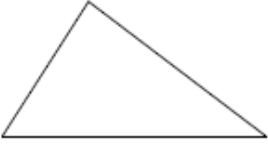
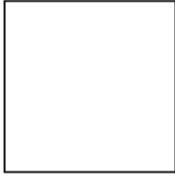

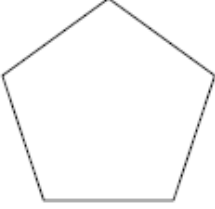
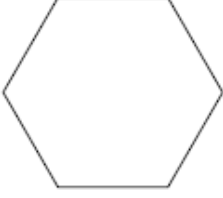
Months with 31 days: January, March, May, July, August, October, December.

Months with 30 days: April, June, September, November.

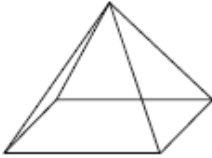
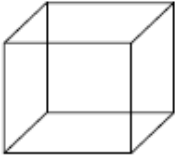
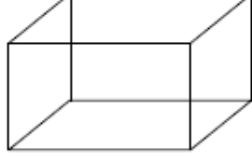
February has either 28 days or in a "Leap Year" 29 days.

Recent and future leap years: 2004, 2008, 2012, 2016, 2020.]

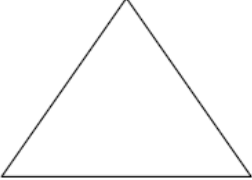
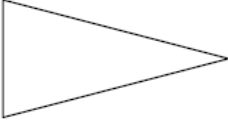

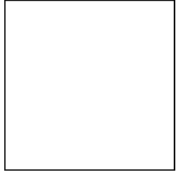

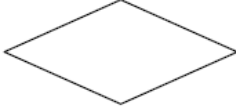

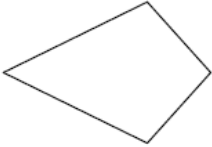

Know 2-D shapes ...

<p>Triangle</p>  <p>Three sided shape</p>	<p>Quadrilateral (e.g. square)</p>  <p>Four sided shape (all sides are equal)</p>	<p>Quadrilateral (e.g. rectangle)</p>  <p>Four sided shape (opposite sides are equal)</p>
<p>Pentagon</p>  <p>Five sided shape</p>	<p>Hexagon</p>  <p>Six sided shape</p>	<p>Other shapes: Heptagon – 7 sides Octagon – 8 sides Nonagon – 9 sides Decagon – 10 sides Dodecagon – 12 sides</p> <p>A shape is called “regular” if all its sides and angles are the same. e.g. a regular quadrilateral is also called a square.</p>

and 3-D shapes

<p>Square based pyramid</p>  <p>Constructed from four triangles and a square</p>	<p>Cube</p>  <p>Constructed from six squares</p>	<p>Cuboid</p>  <p>Constructed from four rectangles and two cubes</p>
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Quadrilaterals and triangles

<p>Equilateral Triangle</p>  <p>All sides are equal in length</p>	<p>Isosceles triangle</p>  <p>Two sides are equal in length</p>	<p>Scalene triangle</p>  <p>No sides are the same length</p>
<p>Square</p>  <p>All sides are equal</p>	<p>Rectangle</p>  <p>Opposite sides are equal</p>	<p>Rhombus</p>  <p>All sides are equal</p>
<p>Parallelogram</p>  <p>Opposite sides are equal</p>	<p>Kite</p> 	<p>Trapezium</p>  <p>One pair of sides is parallel</p>

