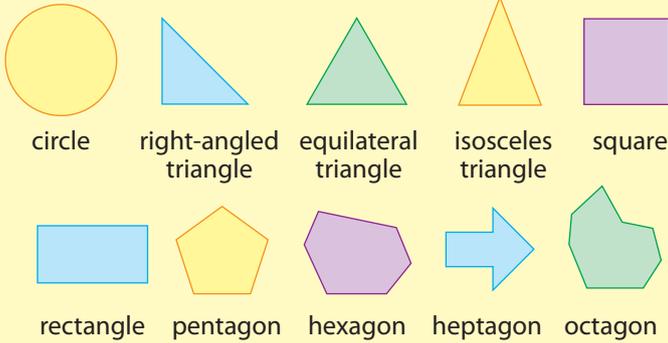
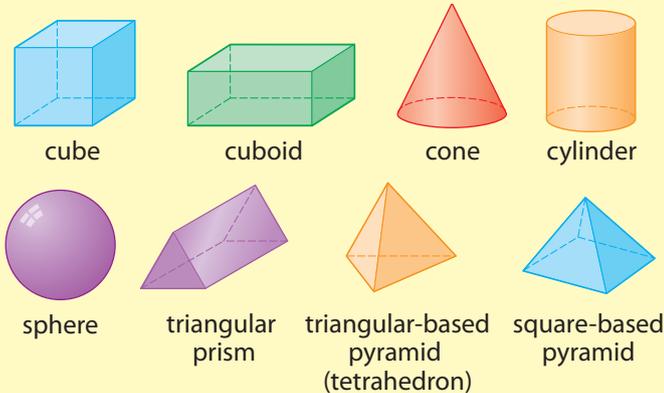


## 2-dimensional (2-D)

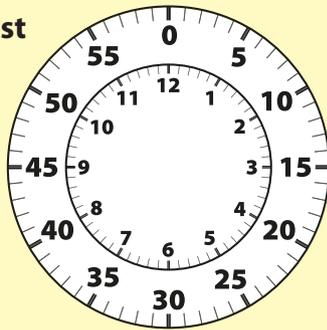


## 3-dimensional (3-D)



## 5, 10, 15 ... minutes past

Ways of counting minutes on an analogue clock. The minute hand takes five minutes to move between each hour mark on the clock face. See also *analogue clock*.



## 12-hour time

Counting hours of the day in 2 blocks of twelve. 12.01-12 noon as a.m. and 12.01-12 midnight as p.m. Often told on a 12-hour clock with hands and known as analogue time.

## 24-hour time

Counting hours of the day from 0-24. Used on digital clocks. 2 p.m. is written as 14:00.



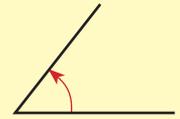
## A

### above/below zero

Temperatures either above or below freezing point (0°C), e.g. 4° below zero is -4°C. See also *minus*.

## acute angle

An angle between 0° and 90°. See also *obtuse*, *reflex angle*.



## addend

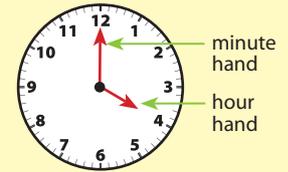
The numbers being added together in an addition calculation. Augend + addend = sum (or total).

$$3 + 5 = 8$$

↑            ↑            ↑  
augend    addend    sum/total

## analogue clock

A dial with hands used to show time. The dial shows 12 hours in a full circle. The minute hand moves 1 complete turn every circle.



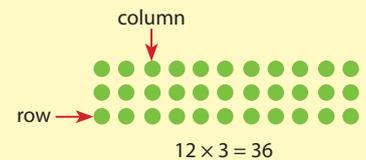
## area

The size of a surface. Measured in 'square' units: mm<sup>2</sup>, cm<sup>2</sup>, m<sup>2</sup>, km<sup>2</sup>.



## array

An arrangement of numbers, shapes or objects in rows of equal size and columns of equal size, used to find out how many altogether.



## augend

The number being added to in an addition calculation. Augend + addend = sum (or total)

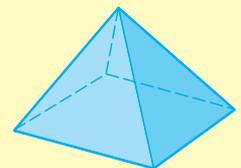
$$3 + 5 = 8$$

↑            ↑            ↑  
augend    addend    sum/total

## B

### base

The flat surface underneath a 3-D shape, e.g. a square-based pyramid has 1 square base and 4 triangular faces.



### breadth

The same as width.

## C

### calendar

A list of the days of the year, arranged by month, week and day.

## capacity

The amount a container holds. It is measured in litres or millilitres, e.g. the capacity of a 2-litre bottle is 2 litres.

## Celsius

A scale used to measure temperature. Sometimes called Centigrade. Units are °C.

## centre

A point at the exact middle of a shape.

## century

100 years.

## commutative

Addition and multiplication are commutative. It does not matter which way you add, multiply or divide, the answer is always the same. Same answer, different calculation, e.g.  $3 + 4 = 4 + 3$ . But subtraction is not commutative, e.g.  $7 - 2 \neq 2 - 7$ .

## consecutive

Numbers which follow each other in order.

**13, 14, 15**

consecutive numbers

**24, 26, 28**

consecutive even numbers

## cylinder, cylindrical

A 3-D object with circular ends and a uniform cross-section. The top is vertically above the base. Like a cylinder.



## D

### data

Pieces of information usually represented in a special way, e.g. on bar charts and pie charts.

### decimal fraction, decimal equivalent

Fractions as tenths or hundredths are represented as digits after a decimal point, e.g. 0.25 is equivalent to  $\frac{1}{4}$  and  $\frac{25}{100}$ .

### degree

A unit used to measure the size of an angle. Symbol: °. There are 360° in one complete turn. Also a unit of temperature.

### denominator

The number of parts the whole has been divided into. The number underneath the vinculum. Also called the divisor.

### diagonal

A straight line inside a shape that goes from one corner to another (but not an edge).



### difference

The result of a subtraction. The difference between 12 and 5 is 7. See also *minuend*, *subtrahend*.

## digital time

Times displayed as on a digital clock, either as 12-hour or 24-hour time.

## dividend

The number that is divided in a division sum, e.g. in  $12 \div 6 = 2$ , 12 is the dividend. See also *divisor*, *quotient*, *division bracket*.

$$\begin{array}{c} \text{divisor} \\ \downarrow \\ \text{dividend} \rightarrow 12 \div 6 = 2 \leftarrow \text{quotient} \end{array}$$

## division bracket

The half box around the dividend in a division.

See also *dividend*.

$$\begin{array}{c} \text{dividend} \\ \leftarrow 16 \overline{) 2112} \\ \uparrow \\ \text{division bracket} \end{array}$$

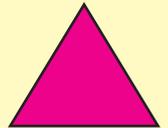
## divisor

The number that is used to divide in a division sum, e.g. in  $12 \div 6 = 2$ , 6 is the divisor. See also *dividend*, *quotient*.

## E

### equilateral triangle

A triangle with 3 equal sides and 3 equal angles of 60°.



### equivalent

Two numbers or expressions that are equal, but which can be in a different form, e.g. £1 is equivalent to 100p. Two fractions are equivalent if they have the same value, e.g.  $\frac{2}{6} = \frac{1}{3}$ .

## F

### factor

Numbers that divide exactly into a number are its factors, e.g. the factors of 12 are 1, 2, 3, 4, 6, 12.

### frequency table

A table showing how often something occurs.

Type of pet	Tally	Frequency
Dog		11
Cat		6
Goldfish		7
Budgie		3

## G

### greatest value, least value

The highest or lowest value that can occur.

## H

### heptagon

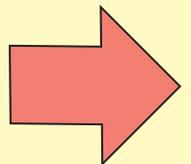
A 2-D shape with seven straight sides.

### hundred thousand

100 000.

### hundredths

A fraction  $\frac{1}{100}$  or 0.01.



## I

### integer, positive, negative

An integer is a whole number which can be positive or negative, e.g.  $-4$ ,  $-2$ ,  $4$ ,  $100$ .

### inverse

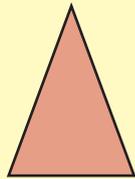
Addition is the inverse of subtraction, e.g.  $16 + 24 = 40$ ,  $40 - 24 = 16$ . Multiplication is the inverse of division, e.g.  $4 \times 12 = 48$ ,  $48 \div 12 = 4$ .

### irregular

Not regular. A shape with sides and angles that are not equal.

### isosceles triangle

A triangle with 2 equal sides and 2 equal base angles.



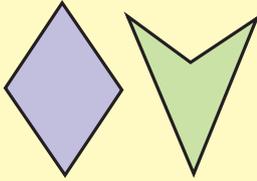
## K

### kilometre

A metric measure of distance.  $1 \text{ km} = 1000 \text{ m}$ .

### kite

A quadrilateral with adjacent sides that are equal.



## M

### mass

A measure of the amount of matter in an object. Measured in grams (g), kilograms (kg) or tonnes (t).

### measuring cylinder

A graduated cylinder for measuring volume and capacity accurately.

### millennium

A thousand years (10 centuries).

### millilitre

Symbol: ml. A measure of capacity.  $1000 \text{ millilitres} = 1 \text{ litre}$ .

### millimetre

Symbol: mm. A measure of length.  $10 \text{ millimetres} = 1 \text{ centimetres}$ .

### million

1 000 000.

### minuend

The starting number in a subtraction calculation, e.g.  $10$  (the minuend)  $- 3$  (the subtrahend)  $= 7$  (the difference). See also *subtrahend*, *difference*.

## minus

Another word for subtraction. The symbol  $-$  shows a negative number. See also *above/below zero*.

## multiple

A multiple is the product of 2 numbers, e.g. the multiples of 7 are 7, 14, 21, 28 and so on.

## multiplicand

A number to be multiplied, e.g. in  $6 \times 3 = 18$ , 6 is the multiplicand. See also *multiplier*.

## multiplier

The multiplying number, e.g. in  $6 \times 3 = 18$ , 3 is the multiplier. See also *multiplicand*.

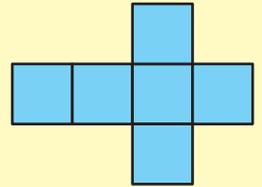
## N

### negative numbers

Numbers below zero. See also *integer*, *positive*, *negative*.

### net

A pattern that you can cut out and fold to make a 3-D shape.



### numerator

The number above the vinculum in a fraction. See also *denominator*.

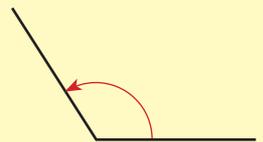
## O

### oblong

An irregular rectangle. A 2-D shape with 2 pairs of opposite sides that are equal and the angles are  $90^\circ$ .

### obtuse angle

An angle between  $90^\circ$  and  $180^\circ$ . See also *acute*, *reflex angle*.



## P

### parallelogram

A 2-D shape with 2 pairs of opposite sides that are equal and parallel. A rectangle is a special parallelogram with all the angles  $90^\circ$ .



### polygon

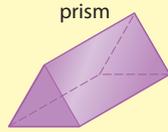
The general name for 2-D shapes with straight sides. Includes triangle (3 sides), quadrilateral (4 sides), pentagon (5 sides) and so on.

## polyhedron

The general name for 3-D shapes with straight sides. Plural polyhedra. Includes tetrahedron, prisms, pyramids, and so on.

## prism

A 3-D shape with 2 identical and parallel ends, joined by rectangular faces. The cross-section of a prism is always the same as the ends.



## product

The result of multiplying 2 numbers. The product of 4 and 3 is  $4 \times 3 = 12$ .

## Q

### quadrilateral

A 2-D shape with 4 straight lines.

### questionnaire

A set of questions given to people to fill in, in order to collect data for analysis. See also *survey*, *data*.

### quotient

The answer to a division calculation, e.g. in  $12 \div 6 = 2$ , 2 is the quotient. See also *dividend*.

$$\begin{array}{c} \text{dividend} \\ \downarrow \\ 12 \div 6 = 2 \leftarrow \text{quotient} \\ \uparrow \\ \text{divisor} \end{array}$$

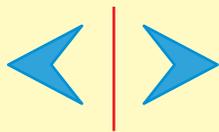
## R

### rectilinear

When all sides meet at right angles.

### reflect, reflection

To transform an object by reflecting it in a mirror line. The image is the same shape and size as the object.

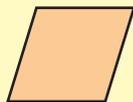


### regular

A 2-D shape with all the sides equal length and equal angles.

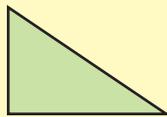
### rhombus

A 2-D shape with 4 equal sides, equal opposite angles.



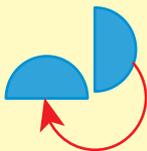
### right-angled triangle

A triangle with 1 right angle. Can be *isosceles* or *scalene*.



### rotate, rotation

To transform an object by turning it in a given direction.



## S

### scalene triangle

A triangle with no equal sides or angles.



## sphere, spherical

A sphere has a curved surface, where every point is the same distance from the centre. A ball-shape.



## square centimetre (cm<sup>2</sup>)

A unit of measure of area equivalent to a square 1 cm by 1 cm. Symbol: cm<sup>2</sup>.

## square number, squared

A square number is a number that is multiplied by itself, e.g.  $1 \times 1 = 1$ ,  $2 \times 2 = 4$ ,  $3 \times 3 = 9$ .

## subtrahend

The number that is subtracted from the minuend. See also *minuend*, *difference*.

## sum

The answer to an addition calculation. The sum of 4 and 5 is 9. See also *total*.

## survey

A survey collects data for analysis. See also *questionnaire*, *data*.

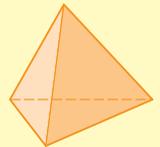
## T

### ten thousand

10 000.

### tetrahedron

A 3-D shape with 4 triangular faces.



### thousand less/more

The number one thousand whole units more or less than another number. 9000 is a thousand less than 10 000 and 11 000 is a thousand more than 10 000.

### timetable

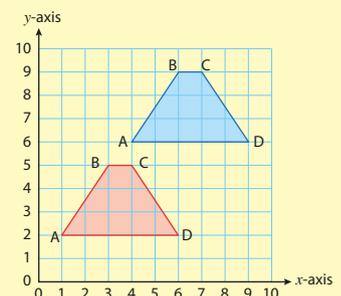
A table listing start and finish or arrival and departure times of activities or events, e.g. a school timetable or a public transport timetable.

### total

The answer to an addition calculation. The total of 4, 3 and 5 is 12. See also *sum*.

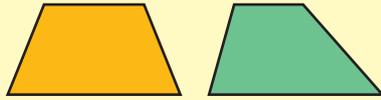
### translate, translation

To transform an object by moving it a given distance and direction. The image is the same shape and size as the object and in the same orientation.



## trapezium

A quadrilateral with 1 pair of parallel sides.



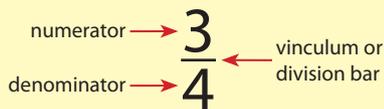
## triangular

Like a triangle, a 2-D shape with 3 straight sides.

## V

### vinculum

The line that separates the numerator and denominator in a fraction.



## W

### weight

The force exerted on a mass by gravity. The units are units of force (Newtons). Often confused with *mass*.

### whole-part relationship

Parts of the whole. In the fraction  $\frac{2}{3}$ , the whole has been divided into 3 equal parts and we are thinking about 2 of those parts. When thinking of an addition calculation, e.g.  $54 + 46 = 100$ , 54 and 46 are the parts and 100 is the whole. There are many whole-part relationships in mathematics.

## X

### x-axis

The horizontal line on a graph or coordinate grid that runs through zero.

## Y

### y-axis

The vertical line on a graph or coordinate grid that runs through zero.