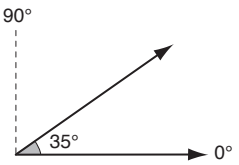
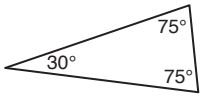
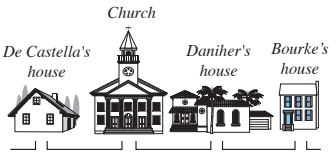
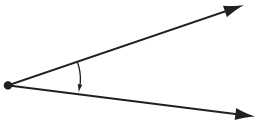
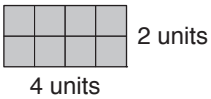
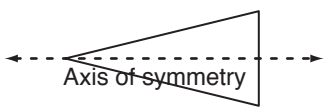
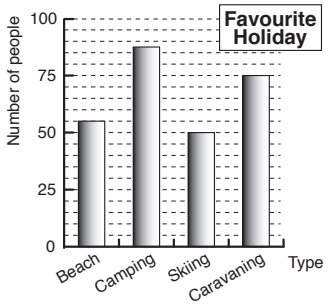
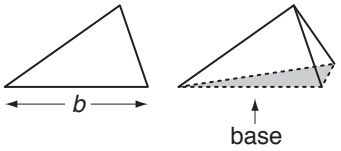
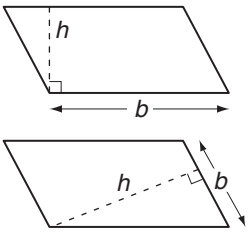
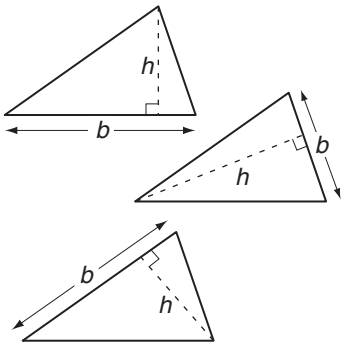
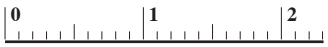
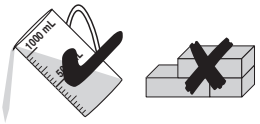
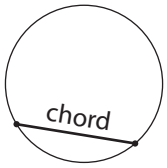
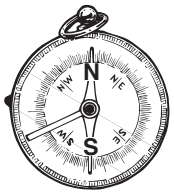
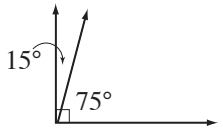
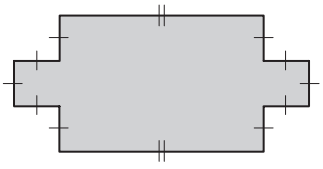
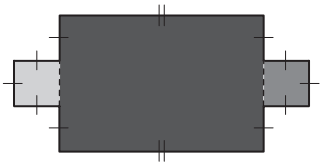
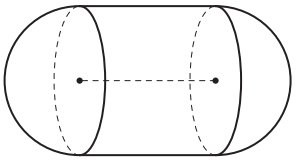
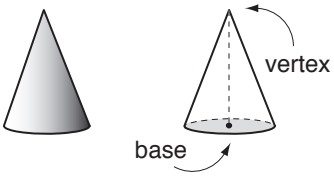
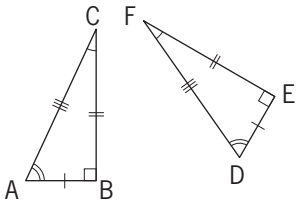
TERMS	DEFINITIONS	EXAMPLES
accuracy	• A measure of how close the result of a measuring comes to the true value.	3.14 is a fairly accurate estimation of π.
acute angle	• An *angle* measuring less than 90°.	
acute-angled triangle	• A *triangle* in which every *angle* measures less than 90°.	
add (+)	• To join together.	If you add 1 black cow and 2 white cows, there are 1 + 2 = 3 cows altogether. 
addition	• The *operation* of finding the total or sum of two or more numbers to make one number. • The result is called the *sum* or *total*.	Adding 15 and 6 we reach a total (sum) of 21. 15 + 6 = 21
adjacent	• Immediately next to.	The Daniher's live adjacent to the Bourke's. 
algebra	• A branch of Mathematics where numbers are represented by letters or symbols, called *variables*.	$x + x = 6$, so x equals 3 ♣ ÷ 3 = 12, so ♣ equals 36
am (**a**nte **m**eridiem)	• The *time* from midnight to midday (morning).	
analogue clock	• A clock or watch that has rotating hands and shows 12 *hour time*.	

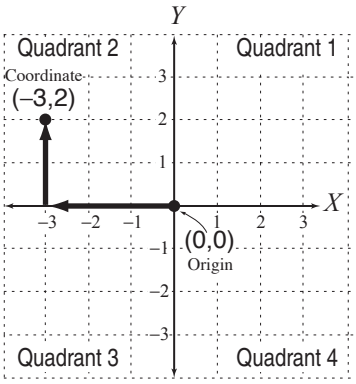
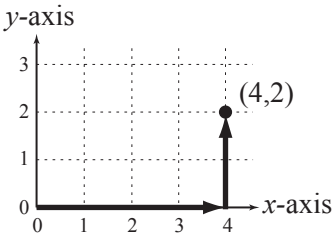
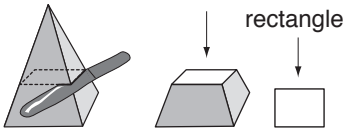
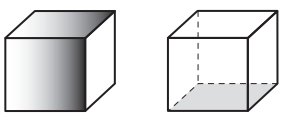
angle	• The amount of turning between two straight *lines* that are fixed at a *point*. • An angle is measured in *degrees*.	
annual	• Happening *once* a *year*.	
anticlockwise	• Moving in the *opposite direction* to the hands on a clock.	
approximate	• Very close to the actual size. • To *estimate* by *rounding off*.	If you have $24.85 in your wallet, you can say you have approximately $25.00
area	• The amount of surface covered by a *2D shape*. • Area is measured in *square units*, e.g. square centimetres (cm^2) or square metres (m^2).	The area of a rectangle is calculated by multiplying length (l) by width (w): $A = lw$ $= 4 \times 2$ $= 8$ Area = 8 square units 
ascending order	• Arranged from smallest to largest. • Becoming larger, greater or higher.	3, 5 and 7 are in ascending order.
associative property of addition and multiplication	• Rule: When *adding* or *multiplying*, no matter how the numbers are grouped, the answers will always be the same.	$a + (b + c) = (a + b) + c$ $1 + (3 + 4) = (1 + 3) + 4$ "+" $8 = 8$ $a \times (b \times c) = (a \times b) \times c$ $1 \times (3 \times 4) = (1 \times 3) \times 4$ "×" $12 = 12$
average	• Or *mean*, is the total of all scores divided by how many scores there are. • The number that could be used to replace every number in a set of numbers without changing the *sum* for the *set*.	The average of 5, 7 and 9 is 7. $5 + 7 + 9 = 21$ and $21 \div 3 =$ **7** So $7 + 7 + 7 = 21$
average speed	• See *speed*.	
axis of symmetry	• (pl. **axes**) See *line of symmetry*.	

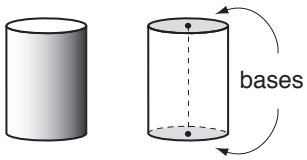
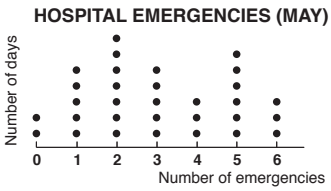
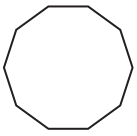
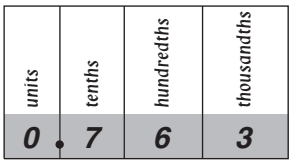
backwards	• Away from your front. • In reverse of the usual way.	
balance (money)	• The amount of money remaining in a bank account after all transactions have been completed.	The bank account held $32. After $12 was withdrawn the balance of the account was $20.
bar graph	• A graph using *columns* to show quantities or numbers so they can be easily compared.	Camping is the favourite holiday. 
base	• A *line* or surface on which a figure stands.	
base of a parallelogram	• The base (b) of a *parallelogram* is the *length* of any of its *sides*.	
base of a triangle	• The base (b) of a *triangle* is the *length* of any of its *sides*.	
between	• At a place bounded by two or more places.	The child is between her parents. 
bi	• (or **di**) Prefix meaning two.	A bicycle has 2 wheels. 

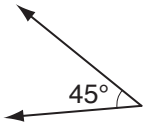
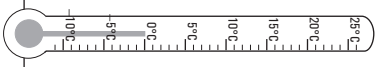
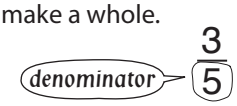
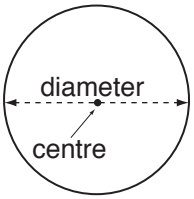
bisect	• To split into two *equal* parts.	AM = MB 
brackets ( )	• A *pair* of symbols used to enclose a mathematical *expression*.	$(12 - 4) \div 2 = 4$ Brackets group 12 take away 4.
calculate	• To find the exact value of mathematical operations.	$3 + 5 + 6 = 14$ 
calendar	• A *time* chart that tells us what *day*, *week*, *month* and *year* it is.	
calibration	• A mark on a *scale*.	
cancel	• To strike out an *equal term* on each side of an *equation*.	$x - 3 = 6$ cancel –3 by adding 3 to both sides of the equation $x - 3 + 3 = 6 + 3$ $\quad -3 + 3 = 0$ $x = 9$
capacity	• Or *volume*, is the measure of the amount of liquid a container can hold.	A jug has capacity because it can hold liquid, a brick does not. 
Cartesian plane	• See *coordinate plane*.	
chance	• The likelihood that a particular result or *outcome* will occur.	The chance of rolling a 2 with a standard die is 1 in 6. 
chord	• A *line segment* on the *interior* of a *circle*. A chord has both end points on the *circumference* of the circle.	
closest	• Nearest to.	The son is closest to the mother. 
coefficient	• The number which multiplies a *variable*.	3 is the coefficient of $3x$ 6 is the coefficient of $6y^4$

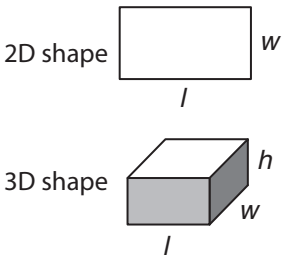
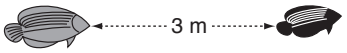
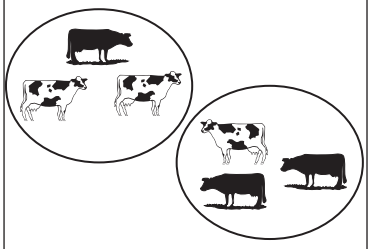
column	• A *vertical* line of *data* in a table.	***Medal Tally - Beijing Olympics 2008*** COUNTRY / Gold / Silver / Bronze China 51 21 28 United States 36 38 36 Russia 23 21 28 Great Britain 19 13 15 Germany 16 10 15 Australia 14 15 17 ↑
combinations	• A selection of objects from a collection. Order is irrelevant.	A class committee is a combination of 2 boys and 2 girls chosen from a total of 12 boys and 15 girls.
common factor	• A *whole number* that is a *factor* of two or more non-zero whole numbers.	The common factors of 18 and 24 are 1, 2, 3 and 6.
common multiple	• A *whole number* that is a *multiple* of two or more non-zero *whole numbers*.	The common multiples of 5 and 6 are 30, 60, 90, ...
compass	• An instrument that shows *direction*.	
complement of an angle	• An *angle* that, when added to the first angle, makes a *right angle* (or 90° in total).	75° is the complement of 15°, because 75° + 15° = 90° 
complementary event	• The *opposite* of an event. All of the outcomes that are not included in the *event*.	If the event is "raining" then the complementary event is "not raining".
composite number	• A *positive integer* that has *factors* other than just 1 and the number itself.	12 is a composite number. $12 = 1 \times 12 = 2 \times 6 = 3 \times 4$ The factors of 12 are: 1, 2, 3, 4, 6, 12
composite shapes	• A combination of two or more *2D* shapes into one figure.	 The above diagram is the composite of 3 rectangular shapes. 

composite space figures	• A combination of two or more *3D* shapes into one object.	
cone	• A *solid* with one circular base and one *vertex*.	
congruent shapes	• Have exactly the same size and shape.	Triangles ABC and DEF are congruent.  **Sides** Corresponding sides are congruent: $\overline{AB} \equiv \overline{DE}, \overline{BC} \equiv \overline{EF}, \overline{AC} \equiv \overline{DF}$ **Angles** Corresponding angles are congruent: $\angle A \equiv \angle D, \angle B \equiv \angle E, \angle C \equiv \angle F$
consecutive numbers	• Numbers that follow each other.	4 and 5 are consecutive numbers. 
constant term	• A *term* that has a fixed value and does not contain a *variable*.	In $y = x + 5$ 5 is constant x and y are variables. The speed of light in a vacuum (c) is a constant. $c = 299\,792\,458$ m/s
conversion factor	• The amount by which you *multiply* or *divide* a number to change it to a different *unit of measurement*.	1 m = 100cm The conversion factor for changing metres to centimetres is 100
convert	• Change from a *unit* to another.	25 kg can be converted to 25 000 g.

coordinate plane	• A *plane* divided into four *quadrants* by a *horizontal line* called the *x-axis* and a *vertical line* called the *y-axis*.	
coordinates	• An *ordered pair* of numbers that locate a *point* on a *coordinate plane*. • The *first* number tells you how far from the *origin* to move along the *x-axis*. The *second* tells you how far from the origin to move along the *y-axis*. • They are written in *brackets* with a comma in between.	(4,2) are the coordinates of a point located 4 units to the right and 2 units upward from the origin (0,0). 
counting number	• Any of the *whole numbers* from zero onwards.	0, 1, 2, 3, 4, 5..... are counting numbers.
cross multiply	• To simplify a *proportion*, written as two *equal fractions* OR • To *multiply* each *numerator* by the *denominator* of the fraction across from it.	$a:b = c:d$ $\frac{a}{b} \times \frac{c}{d}$ $a \times d = b \times c$ $ad = bc$
cross section	• The *shape* of the *face* that results when an object is cut through.	
cross simplify	• To *divide* the *diagonal* numbers (when *multiplying* two *fractions*) by the same number to reduce their value before multiplying.	$\frac{3}{4} \times \frac{8}{9} = \frac{\overset{\div 3}{3}}{\underset{\div 4}{4}} \times \frac{\overset{\div 4}{8}}{\underset{\div 3}{9}} = \frac{\overset{1}{3}}{\underset{1}{4}} \times \frac{\overset{2}{8}}{\underset{3}{9}} = \frac{2}{3}$
cube	• A *solid* with six identical *square* faces.	
cubed	• A number cubed is the third *power* of the number.	5 cubed = $5^3 = 5 \times 5 \times 5 = 125$
cubic unit	• A unit of *volume* expressed in cubic form.	The volume of a solid is measured in the appropriate cubic units, e.g. cm^3 or m^3.

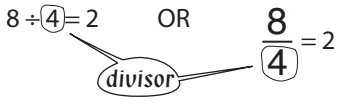
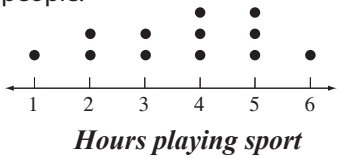
cylinder	• A *solid* with two *parallel* circular *bases* of the same size.	
data	• Collection of information that can include facts, numbers or measurements.	
day	• A *unit* of *time* equal to 24 *hours*.	A day starts and ends at midnight. 
daylight saving time	• Use of fictitious time in the summer months that prolongs light in the evening hours.	During daylight saving clocks are one hour ahead of real time.
deca	• Prefix meaning ten.	Decathlon is an athletics contest with ten events.
decade	• A *unit* of *time* equal to 10 *years*.	2011 to 2020 make a decade.
decagon	• A shape with 10 *sides*.	
decimal number	• A number based on the ten *place value* system where a *decimal point* separates the *units* and *tenths*.	The decimal number 4.3 represents: 4 - ones 3 - tenths OR 4 and 3 tenths.
decimal place		7 is in the tenths place. 6 is in the hundredths place. 3 is in the thousandths place.
decimal point (.)	• A point that separates the *units* and *tenths* in a *decimal number*.	2.5 is a decimal number where the 2 and the 5 are separated by a decimal point.
decrease	• To make smaller.	8 must decrease by 5 to become 3.
deduct	• To take away.	If you deduct 1 from 3 there are 2 left. 3 – 1 = 2

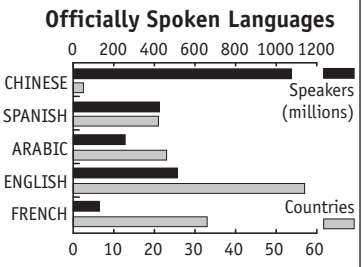
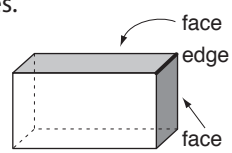
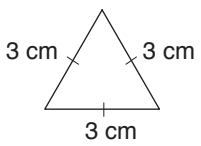
degree (°)	• A *unit* used to measure the amount of turn in an *angle*.	Angle measures 45°. 
degrees Celsius (°C)	• A *unit* used to measure temperature on the Celsius scale, used in the metric system. The Celsius (or centigrade) thermometer was invented by Swedish astronomer Anders Celsius in 1742.	0°C = freezing point of water 100°C = boiling point of water 37°C = human body temperature 
denominator	• The number below the fraction bar in a *fraction*. • The number of equal parts in one whole.	Considering fifths, 5 parts would make a whole. 
deposit (money)	• To pay an amount of money into a bank account.	A deposit of $15 into a bank account with a balance of $25 will increase the account balance to $40.
descending order	• Arranged from largest to smallest. Becoming smaller, lesser or lower.	8, 6 and 2 are in descending order.
diagonal	• A straight *line* inside a *polygon* joining any two *vertices* that are not next to each other.	
diameter of a circle	• A *segment* that passes through the *centre* of a *circle* and has both endpoints on the circle. The diameter of a circle is twice the length of its *radius*.	
die	• (pl. **dice**) A numbered *cube* that is used in games. A standard die has 1 to 6 pips (dots) on each *face* with *opposite* faces adding to 7.	
difference	• The result when a number is *subtracted* from another number. • The amount by which one number is bigger or smaller than another number.	The difference between 5 and 3 is 2. 5 – 3 = 2
digit	• Any of the first ten *whole numbers* from 0 to 9.	There are 10 digits: 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9
digit sum	• The *sum* of the *digits* in a number.	124 has a digit sum of 7. 1 + 2 + 4 = 7

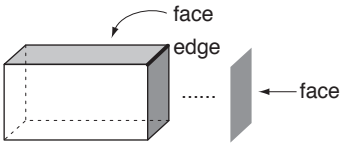
digital clock	• A clock that uses only numbers to show the *time*. (No hands!)	
dimension	• A measure of size. A *two-dimensional* shape (2D shape) has *length* and *width*. A *three-dimensional* shape (3D shape) has *length*, *width* and *height*.	
direction	• The way something is placed, pointing or moving.	North, east, south, west, up, down, sideways, backwards and forwards. 
discount (money)	• An amount *subtracted* from the regular price of an item to get the sale price.	When \$80 track shoes are on sale at 25% off ⇒ discount = 25% of \$80 = \$20.
distance	• The *length* between two *points*.	The distance between the fish is 3 metres. 
divide (÷)	• To share into groups.	These 6 cows are divided into 2 groups.  6 ÷ 2 = 3 in each group
dividend	• The first number written in a division. It is the number being divided. In a *fraction* the dividend is the *numerator*.	In the division: 144 ÷ 9 = 16 the number 144 is called the dividend.
divisible	• Can be divided without a *remainder*.	20 ÷ 2 = 10 with 0 remainder. So 20 is divisible by 2 and 10.

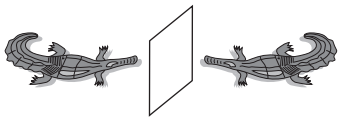
divisibility tests	• Checks performed to help find the *factors* of a number.	

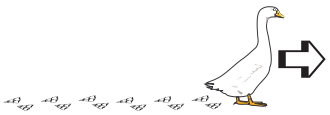
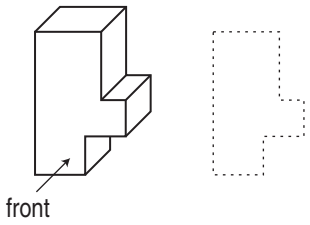
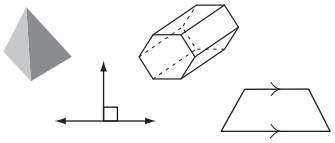
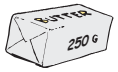
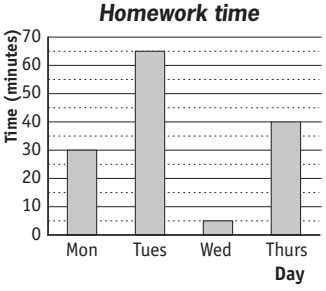
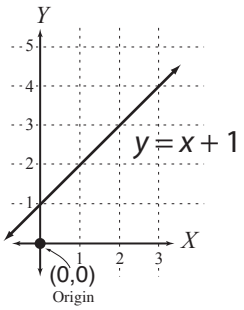
Divisibility tests (factor tricks)	Examples
2 is a factor of all even numbers.	Numbers that end with 0, 2, 4, 6 and 8, e.g. 754, 120
3 is a factor of all numbers with a digit sum that is divisible by 3.	252 has 3 as a factor because 2 + 5 + 2 = 9 and 9 is divisible by 3.
4 is a factor of all numbers where the last two digits are divisible by 4.	1532 has 4 as a factor because 32 is divisible by 4.
5 is a factor of all numbers whose last digit is a 5 or a 0.	120 and 4935 both have 5 as a factor.
6 is a factor of all numbers that have both 2 and 3 as factors.	102 has 6 as a factor because 2 and 3 are both factors.
9 is a factor of all numbers with a digit sum that is divisible by 9.	1764 has 9 as a factor because 1 + 7 + 6 + 4 = 18 and 18 is divisible by 9.
For **11 to be a factor** of a number, the difference between the sum of the even placed digits and the sum of the odd placed digits must be divisible by 11.	81 917 has 11 as a factor because 1 + 1 = 2 8 + 9 + 7 = 24 and 24 – 2 = 22 which is divisible by 11.
For **10, 100, 1000 .... to be a factor** of a number, that number must end in one 0 or two 0's or three 0's, etc.	270 has 10 as a factor, 1400 has 100 as a factor etc.

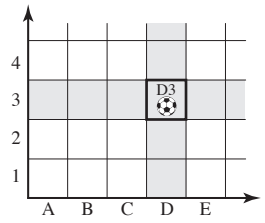
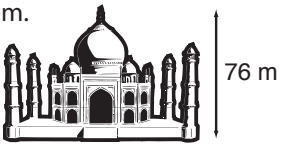
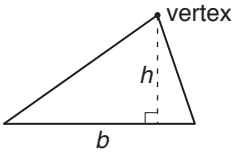
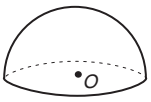
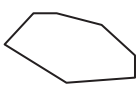
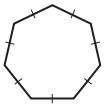
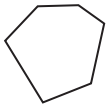
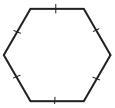
division	• The *operation* of sharing or grouping a number into *equal* parts.	The division 6 ÷ 2 = 3 means: How many groups of 2 can 6 be divided into? OR How many groups of 2 can be taken from 6 before none remain? ⇒ 3 groups of 2. 
divisor	• The *second* number written in a *division*. • It is the number that will divide the *dividend*. In a *fraction* the divisor is the *denominator*.	
dodecahedron	• A regular *solid* in which all twelve *faces* are *regular pentagons*.	
dot plot	• A *graph* showing the frequency of data, using a *number line*. • The number line has all the numbers in the *sample*. Each observation is marked with a point above the *line*.	A graph using dots to show how many hours are dedicated to sport by 12 people.  ***Hours playing sport***

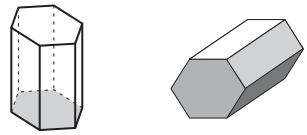
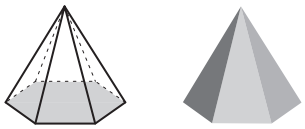
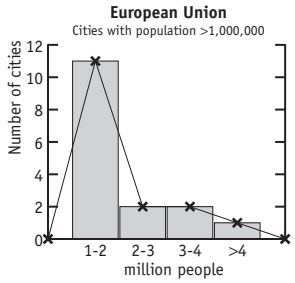
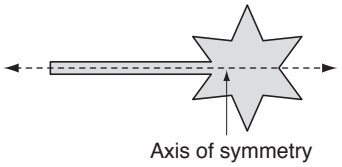
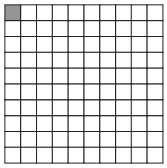
double	• *Twice* as much. • *Multiplied* by two.	Double 4 is: $4 + 4 = 8$ OR $4 \times 2 = 8$.
double bar graph	• A *bar graph* that shows two sets of *data* on the same graph.	
east	• A *compass direction*.	The sun rises in the east. 
edges of a solid	• The *segment* (line part) where two *faces of a solid* meet.	A rectangular prism has 12 edges. 
eighth	• The position after *seventh*.	1st, 2nd, 3rd, 4th, 5th, 6th, 7th, **8th**.....
elapsed time	• The amount of *time* between the start time and the finish time.	The amount of elapsed time from 2:15 pm to 3:00 pm is 45 minutes.
ellipse	• A curved shape that looks like a squashed *circle*.	The orbit of the Earth around the Sun is approximately an ellipse. 
enlargement	• To reproduce and make bigger.	The second object is an enlargement of the first. 
equal (=)	• Exactly the same in value or size.	$7 + 2 = 9$ 100 centimetres is equal to 1 metre: 100 cm = 1 m
equation	• A mathematical sentence formed by placing an *equals* sign (=) between two *expressions*.	$6 \times 2 = 9 + 3$ $4x - 5 = 0$ $2y^2 - 2 = 0$ are examples of equations.
equilateral triangle	• A *triangle* with all three *sides* of equal *length*.	

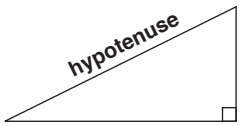
equivalent fractions	• *Fractions* that represent the same number.	$\frac{2}{16}$ and $\frac{8}{64}$ are equivalent fractions. They both equal $\frac{1}{8}$.
error	• The variation of a measurement. It may be contributed to by the *precision* of the instrument or the *accuracy* of the measured value.	"My measuring may be off by 1%!"
estimate	• To make a close guess based on *rounding*.	48 + 21 = ? By rounding to 50 + 20, the estimation of the sum is 70.
evaluate	• To work out the value.	Evaluate: $7 \times 3 - 10 = 21 - 10$ $= 11$
even numbers	• A *whole number* that can be *divided* by two. • Even numbers end with 0, 2, 4, 6 or 8.	134 is an even number. 134 ✔ 431 is not an even number. 431 ✘
event	• Possible *outcomes* resulting from a particular *experiment*.	Experiment: A die is rolled. Possible outcomes: Either a 5 or a 6 may result 
expense (money)	• The cost involved.	You buy 3 CDs at $15 each. Your expense is $45.
experiment	• A controlled, repeatable process carried out in the study of *probability*.	Tossing a coin is an experiment. 
expression	• A *sequence* of numbers and/or *variables* (letters) connected by *operation* signs.	$42 \div 3 - 10$ $x + 2y$ $2x^2 - 2$ are examples of expressions
faces of a solid	• *Polygons* that join on their *edges* to form a *solid*.	A rectangular prism has 6 rectangular faces. 

factor	• When *whole numbers*, other than zero, are multiplied together, each number is a factor of the *product*. OR A whole number that divides exactly into another number. See *divisibility tests*. • To write a number as a *product* of its *factors*. • To write an *expression* as a product of two or more expressions.	Because $1 \times 12 = 12$ $2 \times 6 = 12$ and $3 \times 4 = 12$ 1, 2, 3, 4, 6 and 12 are all factors of 12. Factor: $3x + 15 = 3(x + 5)$ because $3 = 3 \times 1$ and $15 = 3 \times 5$
factor tree	• A diagram that shows all possible *factors* on the different branches of a 'tree'. It is used to find the *prime factors* of a number.	The prime factors of 12 are 2 and 3. 12 $= 2 \times 6$ $= 2 \times 2 \times 3$
favourable outcome	• The result that you are hoping or testing for.	Experiment: A die is rolled. Event: A number > 2 comes up Favourable outcomes: 3, 4, 5 or 6.
fifth	• The position after *fourth*.	1st, 2nd, 3rd, 4th, **5th**.....
finite	• With limits. Able to be counted.	There are a finite number (12) of months in the year.
first	• Placed before anything else.	The first athlete to cross the finish line won the gold medal.
flip	• To turn across a line so the result is a mirror image. See *reflection*.	
formula	• (pl. **formulae**) A mathematical *rule*, usually an *equation*, describing a relationship between two or more quantities. For example, the formula describing the area of a circle is $A = \pi r^2$ where A is the symbol for the area and r is the symbol for the *radius*.	Find the area of a circle of radius 10 cm, using $\pi \approx 3.14$ Use the formula $A = \pi r^2$ and substitute $r = 10$ $A = 3.14 \times 10^2$ $= 3.14 \times 100$ $= 314\ \text{cm}^2$
fortnight	• A *unit* of *time* equal to 2 whole *weeks* or 14 *days*.	

forwards	• In the *direction* of your front. • The usual way.	
fourth	• The position after *third*.	1st, 2nd, 3rd, **4th**.....
fraction	• Part of a group. • Part of a whole. • A number in the form $\frac{a}{b}$ $(b \neq 0)$ where a is the *numerator* and b is the *denominator*. • Fractions can be *proper fractions* or *improper fractions*.	5 out of 8 dots are circled.  $\frac{5}{8}$ 1 half of a whole orange.  $\frac{1}{2}$
front view	• What you see of an object looking from a frontal perspective. • *Three-dimensional* objects have 3 views: front, top and side.	
function (*f*)	• A relationship or correspondence in which values of one *variable* determine the values of another: $f(x)$ = rule or y = rule.	$f(x) = x^2 - 4$ or $y = x^2 - 4$ See *rule* and *linear function*.
geometry	• A branch of Mathematics studying the properties and relations of *lines*, surfaces and *solids*.	
gram (g)	• A *unit* of *measurement* for *mass equal* to 1000 *milligrams*.	250 g of butter. 
graph	• A diagram that shows a collection of *data*.	
graph of a rule	• The picture obtained by plotting all the points of the *rule*.	

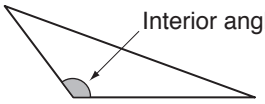
greater than (>)	• An *inequality symbol* showing which is bigger.	10 > 2 means 10 **is greater than** 2.
grid reference	• A pair of letters and/or numbers that describe *location* within a grid. See also *coordinates*.	The grid reference for the ball is D3. 
half	• (pl. **halves**) One of two *equal* parts expressed as a fraction.	One half is 1 of 2 parts of one whole pizza: 
hedron	• (pl. **hedra**) Face.	Polyhedron - A solid object that has multiple (poly) faces. 
height	• The *vertical* distance from top to bottom.	The height of the Taj Mahal is 76 m. 
height of a triangle	• The height (*h*) is the *distance* from the *vertex* to the *opposite* side of the *triangle*.	
hemisphere	• One half of a *sphere*.	
hepta	• Prefix meaning seven.	See *heptagon*
heptagon	• A *polygon* with 7 sides.	 Heptagon  Regular heptagon
hexa	• Prefix meaning six.	See *hexagon*
hexagon	• A *polygon* with 6 sides.	 Hexagon  Regular hexagon

hexagonal prism	• A *three-dimensional* shape. Two identical *bases* are *hexagons*. Six *faces* are *rectangles*.	
hexagonal pyramid	• A *three-dimensional* shape. The *base* is a *hexagon*. Six faces are *triangles*.	
hexahedron	• A *regular solid*. Six faces are *square (cube)*.	
highest common factor (HCF)	• The largest number that is a *factor* of all the given numbers.	Factors of 12: 1, 2, 3, 4, 6, 12 Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30 The HCF of 12 and 30 is 6.
histogram	• A *vertical bar graph* used to represent the *frequency* of individual scores.	
horizontal line	• *Parallel* to the horizon.	
horizontal symmetry	• A shape has horizontal symmetry if an *axis of symmetry* is horizontal.	
hour (h)	• A *unit* of *time equal* to 60 *minutes*.	One hour is the amount of time between 1 o'clock and 2 o'clock.
hundreds	• The *place value* between *tens* and *thousands*.	1825.763 has 8 hundreds. thousands: 1 · hundreds: 8 · tens: 2 · units: 5 · tenths: 7 · hundredths: 6 · thousandths: 3
hundredth	• One part out of 100 parts of one whole.	

hundredths	• The *place value* between *tenths* and *thousandths*.	1825.763 has 6 hundredths. thousands: 1, hundreds: 8, tens: 2, units: 5, tenths: 7, hundredths: 6, thousandths: 3
hypotenuse	• The side *opposite* the *right angle* of a *right-angled triangle*. • The longest side of a right-angled triangle.	
icosahedron	• A *regular solid* in which all twenty *faces* are *equilateral triangles*.	
improper fraction	• Any *fraction* in which the *numerator* is greater than or equal to the *denominator*.	$\frac{9}{8}$ the numerator is 9 the denominator is 8. $9 \geq 8$ so $\frac{9}{8}$ is an improper fraction.
increase	• To make larger or grow in size.	8 must increase by 5 to get to 13.
index	• (pl. **indices**) A number placed to the upper right of a base number, showing how many times the base number is multiplied by itself.	$7^4 = 7 \times 7 \times 7 \times 7 = 2401$ The index is 4. It is read as 'seven to the power of four'.
index notation	• Quantities in the form of a *base* number and an *index*. Index notation indicates what *power* is to be used and makes it easier to use multiple *factors*.	$3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$ can be more easily written using index notation as 3^7.
inequality symbols	• Symbols that tell us how the two objects or *expressions* in a mathematical sentence are not *equal*.	$<, >, \leq$ and $\geq$ are inequality symbols.
infinite (∞)	• Has no limits. Unable to be counted. • The symbol for infinity is (∞).	There are an infinite number of integers: ..... $-3, -2, -1, 0, 1, 2, 3$ .....
integer ($\mathbb{Z}$)	• Any *negative number*, zero or *positive number*.	$-3, -2, -1, 0, 1, 2, 3$ are integers. 3.5 and $5\frac{2}{3}$ are not integers.

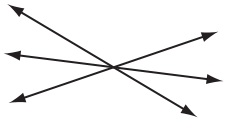
interior angle

• An *angle* inside a *polygon*.



intersecting lines

• *Lines* that meet at a *point*.



inverse of an operation

• The *opposite* operation. Operations that undo each other.

+ is opposite –
× is opposite ÷

Operation +	Inverse Operation –	Operation –	Inverse Operation +	Operation ×	Inverse Operation ÷	Operation ÷	Inverse Operation ×
$x+3=6$		$x-3=6$		$3x=6$		$\frac{x}{3}=6$	
$x+3-3=6-3$		$x-3+3=6+3$		$\frac{3x}{3}=\frac{6}{3}$		$\frac{x}{3}\times 3=6\times 3$	
$x=3$		$x=9$		$x=2$		$x=18$	

invest (money)

• To put some form of money at risk to make a *profit*.

It is common to invest in shares.

investment (money)

• The act of laying out some form of money in an enterprise to make a *profit*.

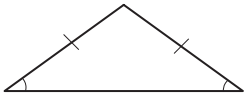
irrational number

• A *real number* that can be written as an infinite non-repeating decimal, but not as a *fraction*.
• Not a *rational number*.

$\pi, \varphi, e, \sqrt{2}, \sqrt{3}, \sqrt{5}$,
2.6293045632....
cos 30°
tan 60°

isosceles triangle

• A *triangle* with two sides of equal length.



kilogram (kg)

• A *unit* of *weight equal* to 1000 *grams*.

My father weighs 75 kg.

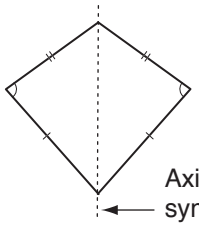
kilometre (km)

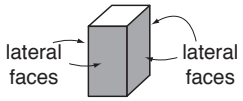
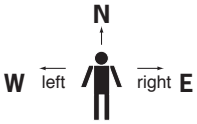
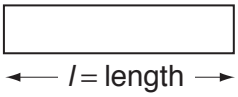
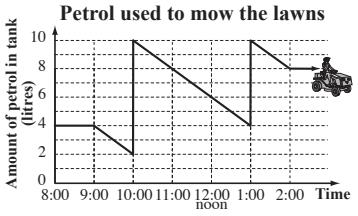
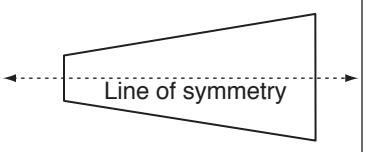
• A *unit* of *distance equal* to 1000 *metres*.

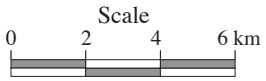
The distance from Melbourne to Sydney is 925 km.

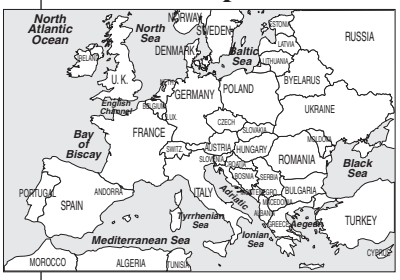
kite

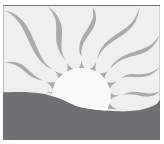
• A *quadrilateral* where one *diagonal* is an *axis of symmetry*.

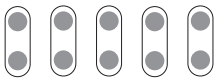
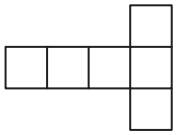
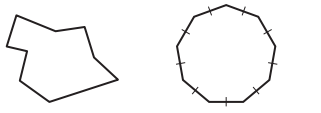
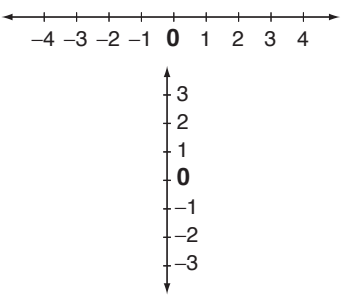


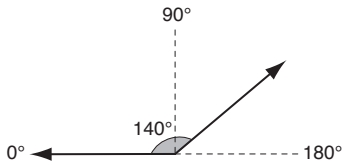
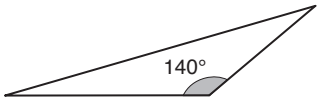
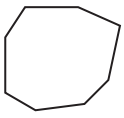
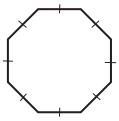
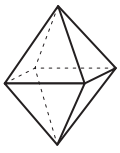
largest to smallest	• Ranking in order from the biggest to the littlest.	
lateral area	• The *sum* of the area of the *lateral faces* of a solid.	A rectangular prism has 4 lateral faces.
lateral faces	• The *vertical* surfaces on a solid.	A rectangular prism has 4 lateral faces. 
leap year	• A *year* with 366 *days* that falls every *fourth* year and includes the 29th of February as the extra day.	A leap year is divisible by 4. 2012 is a leap year.
left	• The *direction* to the *west* of your body if you are facing *north*.	
length	• The *distance* from one end to the other. • How long a shape is.	
less than (<)	• An *inequality symbol* showing which is smaller.	$2 < 10$ means that 2 **is less than** 10.
like terms	• *Terms* that contain the same *variables* raised to the same *power*. Only the number parts of like terms can be different. Like terms may be added, subtracted, multiplied or divided. *Unlike terms* may not be added or subtracted. However, they may be multiplied and divided.	• 7, $\frac{6}{9}$ and -18 are like terms. • $6a$, a and $-3a$ are like terms. • xy^2, $5xy^2$ and $-3xy^2$ are like terms. • 7, $6a$ and $-4y^3$ are not like terms. • $5w$, $\frac{6}{w}$ and $-18w^2$ are not like terms.
line graph	• A *graph* in which *points* representing *data* pairs are connected by line *segments*. It shows how quantities change over *time*.	
line of symmetry	• A *line* that divides a shape so that one *side* is a mirror image of the other. Both sides match exactly when folded.	

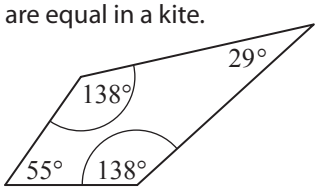
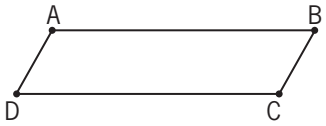
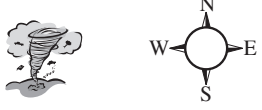
linear equation	• An algebraic *expression* in which the *variable* is in the first *power*. It can be solved for x and the value of x for which the *equation* is true is called the *solution*. The *graph* of a linear equation is always a straight *line*. See *linear rule*.	$4x - 2 = x$ is a linear equation.
linear rule (linear function)	• A *rule* in which the *variable* is only in the first *power* and has no *products*. It can be represented by an *equation* in the form of $y = ax + b$ where a and b are *real numbers*. The *graph* of this rule is a straight line.	Used to describe things like the movement of a car travelling at a constant speed. $y = x + 4$ $y = -4$ $3x - 4y = 0.5$ are linear rules.
linear scale	• A *scale* shown on a line. Compares the dimensions on a map to real life.	Every cm on the map represents 2 km in real life. 
litre (L)	• A *unit* of *capacity* equal to 1000 millilitres.	1 litre of milk. 
location	• The exact place, where something is situated.	
longest	• Having the biggest *length*.	The record length for the reticulated python of S-E Asia is 10 m. The specimen was found in Celebes, Indonesia in 1912. 
loss (money)	• A reduction in the value of an investment. • Expenses > Revenue	Revenue from a business activity is $20. If the expenses are $25 then the loss would be $5.
lowest common denominator	• The *lowest common multiple* of the *denominators* of two or more *fractions*.	The lowest common denominator of $\frac{2}{3}$ and $\frac{4}{5}$ is the lowest common multiple of 3 and 5, which is 15.
lowest common multiple (LCM)	• The smallest of the common *multiples* of two or more non-zero *whole numbers*.	The lowest common multiple of 6 and 9 is the smallest of their common multiples 18, 36, 54 ..., so the LCM of 6 and 9 is 18.

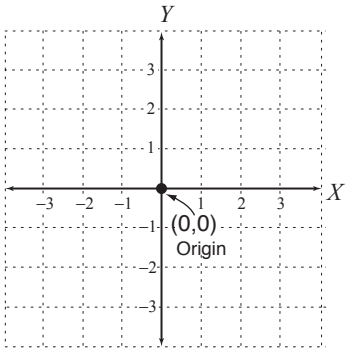
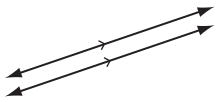
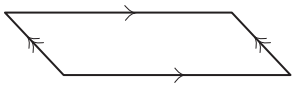
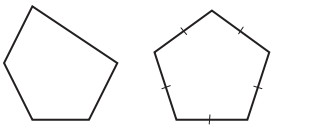
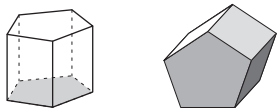
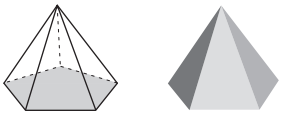
magic square	• A square grid filled with numbers. • The *sum* of the numbers in every *row*, *column* and *diagonal* is the same.	4 9 2 3 5 7 8 1 6 Rows: 4 + 9 + 2 = 15 3 + 5 + 7 = 15 8 + 1 + 6 = 15 Columns: 4 + 3 + 8 = 15 9 + 5 + 1 = 15 2 + 7 + 6 = 15 Diagonals: 4 + 5 + 6 = 15 2 + 5 + 8 = 15
map	• A diagram of a region showing its position in the world.	**Europe** 
mass	• The amount of matter that an object contains. It is measured in *units* like grams (g) and kilograms (kg). Often called weight, but not the same.	The mass of the block of butter is 250 g. The weight of an object changes according to the gravity. A packet of butter would be weightless in space, even though it still has the same mass as on earth.
maximum	• The highest value.	The maximum speed in a residential area is 60 km per hour. 
mean	• Or *average*, is the total of all scores divided by how many scores there are. • To calculate the mean: 1) *Add* up the values. 2) *Divide* the total by the number of values.	4 6 5 + 9 24 24 ÷ 4 = 6 The average or mean of 4, 6, 5 and 9 is 6.
median	• The middle value of an ordered *set* of values. • If there is an *even number* of values then the median is the *average* of the two middle numbers.	Data: 2, 5, 6, 8, 9 Median is 6 Data: 2, 3, 5, 6, 8, 8 Average the two middle values: 5 + 6 = 11 11 ÷ 2 = 5.5 Median is 5.5
metre (m)	• A *unit* of *length equal* to 100 centimetres.	Track distances are measured in metres.
millilitre (mL)	• A *unit* of *capacity*. • 1000 millilitres is *equal* to 1 *litre*.	Medicines are measured in mL.

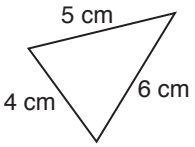
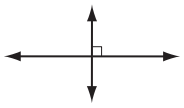
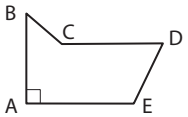
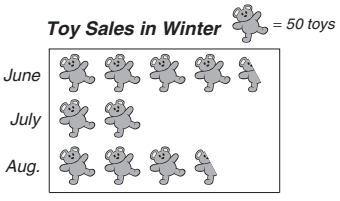
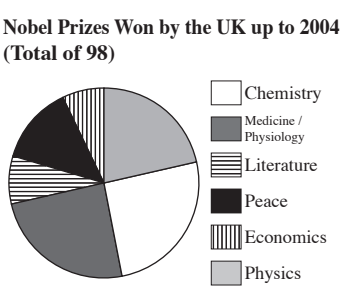
millimetre (mm)	• A *unit* of *length*. • 1000 millimetres is *equal* to 1 *metre*.	Timber length is measured in millimetres.
million	• A thousand thousands.	1 000 000
minimum	• The lowest value.	The minimum temperature reached yesterday was 10°C.
minus (–)	• Another word for *subtract*. To take away.	\$20 minus \$5 is \$15. 20 – 5 = 15
minute (min)	• A *unit* of *time equal* to 60 *seconds*.	One minute has 60 seconds.
mixed number	• The *sum* of a *whole number* and a *fraction* less than one.	$3\frac{5}{7}$ is a mixed number.
mode	• The most frequent score in a set of *data*.	Data: 2, 3, 5, 7, 7, 7, 8, 8, 9 The mode is 7 as 7 occurs three times.
month	• A *unit* of *time equal* to 28, 29, 30 or 31 *days*.	There are 12 months in a year starting with January. 
morning	• The early part of the *day* ending at 12 noon.	
multiple	• A multiple of a *whole number* is the *product* of that number with any non-zero whole number.	The multiples of 2 are 2, 4, 6, 8, 10, ... 2 × 1 = 2 2 × 2 = 4 2 × 3 = 6 etc.
multiple events	• More than one *event*, where their individual results are totally unaffected by whether or not the other event does or does not occur.	*Possible outcomes* Die: 1 2 3 4 5 6 Spinner 1: (1,1) (1,2) (1,3) (1,4) (1,5) (1,6) Spinner 2: (2,1) (2,2) (2,3) (2,4) (2,5) (2,6) Spinner 3: (3,1) (3,2) (3,3) (3,4) (3,5) (3,6)

multiplication	• An *operation* where a number is added to itself a number of times.	$2+2+2+2+2=10$ or $5\times2=10$ 
multiply ($\times$)	• To find total in a number of groups.	Three lots of 2 cows is 6. $3\times2=6$ or $2+2+2=6$ 
natural number ($\mathbb{N}$)	• A counting number from 1 to *infinity*.	1, 2, 3, 4, 5.....∞
negative number	• A number that is *less than* zero.	$-1, -2, -3, -4, -5, ...$ are negative numbers.
net	• The pattern cut out to form a *3D* shape.	Possible net of a cube. 
ninth	• The *position* after *eighth*.	1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, **9th**.....
nona	• Prefix meaning nine.	See nonagon
nonagon	• A *polygon* with 9 sides.	
north	• A *compass direction*.	
north-east	• A *compass direction*.	
north-west	• A *compass direction*.	
number line	• An evenly marked *line* that shows position of numbers. • *Points* are marked with numbers in *ascending order* from left to right (horizontal number line) or from bottom to top (vertical number line). • Zero represents the *origin* of a number line.	

number sentence	• A sentence using numbers and operations instead of words.	"Mary had four cats and two dogs. How many pets did she have?" Number sentence: $4 + 2 = 6$
numeral	• A symbol used to represent a number.	Arabic numerals: 1, 2, 3, 4, 5 Roman numerals: I, II, III, IV, V
numerator	• The number above the fraction bar in a *fraction*. • The number of parts that are counted.	numerator $\frac{3}{5}$ 3 parts out of 5 count
oblique line	• A line at an *angle* to the horizon.	
obtuse angle	• An *angle* measuring greater than 90° and less than 180°.	
obtuse-angled triangle	• A triangle with one *angle* measuring greater than 90° and less than 180°.	
octa	• Prefix meaning eight.	An octopus has 8 legs. 
octagon	• A *polygon* with 8 sides.	 Octagon  Regular octagon
octahedron	• A *solid* with eight *faces*. • A regular octahedron has faces that are all *equilateral triangles*.	 
odd numbers	• A *whole number* that is not *divisible* by 2.	Odd numbers end with 1, 3, 5, 7 or 9.
of	• Seen in context like 'a *fraction* **of** a number', it means to *multiply*.	A quarter of 100 means $\frac{1}{4}$ of 100, or $\frac{1}{4} \times 100 = 25$

once	• On one occasion.	Just this time!
operation	• A mathematical process performed according to certain *rules*.	There are four basic operations in arithmetic: addition $3 + 12$ subtraction $3 - 1$ multiplication 1×5 division $6 \div 3$ There are many complex operations like: sine 30°, $\sqrt{9}$ and $\log_{10} 100$, 5^4.
opposite angles	• Angles across from each other in a shape.	One pair of opposite angles are equal in a kite. 
opposite sides	• Sides across from each other in a shape.	Side $\overline{AB}$ is opposite to side $\overline{CD}$ Side $\overline{AD}$ is opposite to side $\overline{BC}$ 
opposites	• Two *numbers* with the same *absolute value* but different *signs*.	The opposite of +4 is –4.
order	• Placing a group in a special arrangement.	The aliens are arranged in order of height. 
order of operations	• The order of doing *operations* is: 1) *Simplify* inside all *brackets*. 2) *Evaluate powers* and *square roots*. 3) Calculate × and ÷ from left to right. 4) Calculate + and – from left to right.	Calculate $4 + 3^2 \times (6 - 2)$ by 1) $4 + 3^2 \times (6 - 2)$ 2) $= 4 + 3^2 \times 4$ 3) $= 4 + 9 \times 4$ 4) $= 4 + 36$ $= 40$
ordered pair	• See *coordinates*.	
ordinal numbers	• A *whole number* that shows position.	1st, 2nd, 3rd, 4th, 5th..... are ordinal numbers.
orientation	• Position relative to *direction*.	The tornado is coming from the west. 

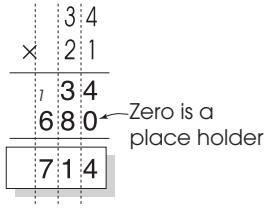
origin	• The point of *coordinates* (0,0) on a *coordinate plane*.	
outcome	• Result of an event.	The outcome (result) of tossing a coin was to turn up a head.
pair	• Two together.	
palindrome	• A number with 2 or more digits that reads the same *forwards* and *backwards*.	44 or 6116 are palindromic numbers.
parallel lines	• *Lines* in the same *plane* that never cross over. They are marked with matching arrows.	
parallelogram	• A special *quadrilateral*. *Opposite* sides are *parallel lines*. *Opposite* sides are equal in length.	
pattern	• Numbers or objects that are arranged following a *rule*.	
penta	• Prefix meaning five.	See *pentagon*
pentagon	• A *polygon* with 5 sides.	
pentagonal prism	• A *three-dimensional* shape. Two identical, *parallel bases* are *pentagons*. Five *faces* are *rectangles*.	
pentagonal pyramid	• A *three-dimensional* shape. *Base* is a *pentagon*. Five *faces* are *triangles*.	

per	• For each. • Can be written as a forward slash (/).	20 kilometres per hour or 20 km/h means 20 kilometres travelled for each hour.
percentage	• Out of 100. • '*Per*' means for each, 'cent' means 100.	$59\% = \frac{59}{100} = 0.59$
perfect square	• Any number that is the result of multiplying two *rational numbers* together.	$0, 1, 4, 9, 16, 25, \frac{1}{25}, \frac{4}{9}$ etc. are all perfect squares.
perimeter	• The *distance* around the outside of a *shape*.	Add the length of all sides. Perimeter = 4 + 5 + 6 = 15 cm 
perpendicular lines	• Lines on a *plane* that *intersect* to form a *right angle*.	
perpendicular sides	• Sides on a *shape* that are at *right angles* to each other.	$\overline{AB}$ is perpendicular to $\overline{AE}$. 
perspective	• The appearance of objects affected by size and *position*.	
pi (π)	• The *ratio* of the *circumference* of a *circle* to its *diameter*. The diameter of a circle wraps around the circle approximately 3.14 times.	3.14 or $\frac{22}{7}$ is the approximate value of π. Pi is an infinite number. π = 3.14159 26535 89793...
pictograph	• A *graph* that uses pictures or symbols to represent *data*.	
pie graph	• A *graph* that represents *data* as a *sector* of a *circle*.	

place holder

• Minds a spot in a number.

Zeros are used as place holders in long multiplication algorithms.



place value

• Value according to position in a number.

954
5 is in the tens place
5 has a value of 50.

millions	*hundreds of thousands*	*tens of thousands*	*thousands*	*hundreds*	*tens*	*units*	• *decimal point*	*tenths*	*hundredths*	*thousandths*
1 000 000	*100 000*	*10 000*	*1000*	*100*	*10*	*1*		$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

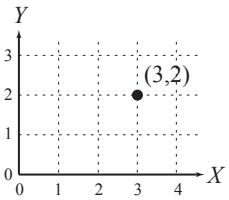
plane

• A flat surface.

plot

• To mark a *point* on a *coordinate plane*.

The point of coordinate (3,2)

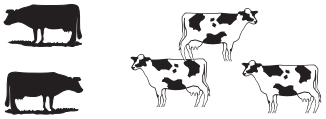


plus (+)

• Another word for *addition*. To add.

2 cows plus 3 cows gives you 5 cows.

2 + 3 = 5



pm
(**p**ost **m**eridiem)

• The *time* from midday to midnight.

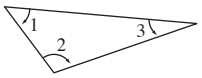
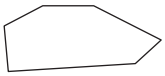
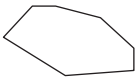
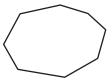
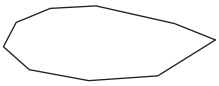
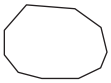
Every night Jimmy starts reading at 9 pm.

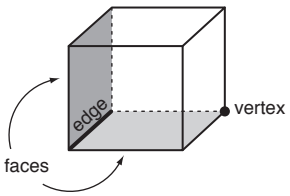
point

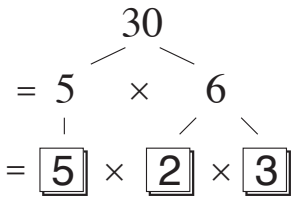
• A position in space represented by a dot.

• *P*

polygon	• A closed *two-dimensional* shape for which all sides are line segments. 3 or more *sides* and *angles*.	'Poly' means many and 'gon' means angle. Example: A triangle has 3 angles.

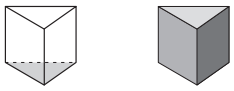
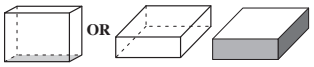
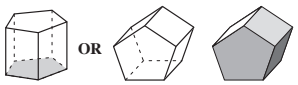
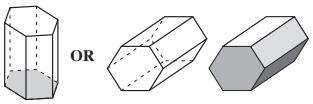
polygon *(many angles)*	**regular polygon** *(all sides and all angles are equal)*	Number of Sides	Number of Interior angles
Triangle  3 angles	Equilateral triangle 	3	3
Quadrilateral  4 angles	Square 	4	4
Pentagon  5 angles	Regular pentagon 	5	5
Hexagon  6 angles	Regular hexagon 	6	6
Heptagon  7 angles	Regular heptagon 	7	7
Octagon  8 angles	Regular octagon 	8	8
Nonagon  9 angles	Regular nonagon 	9	9
Decagon  10 angles	Regular decagon 	10	10

polyhedron	• A *three-dimensional* shape. Four or more *faces*. Described by their *faces*, *edges* and *vertices*.	'Poly' means many and 'hedron' means faces. Example: A hexahedron has 6 faces. 
population	• The entire group under consideration in a statistical analysis.	The population of a country is every person who lives in that country.
position	• Where something is in relation to things around it.	In, on, under, behind, next to.
positive numbers	• A number that is *greater than* zero.	+1, +2, +3, +4, +5, ... are positive numbers.

possible outcomes	• The total number of result options.	When you toss a coin there are 2 possible results: heads or tails.
power	• An *expression*, such as 4^3, in which the base (4) is *multiplied* by itself a number of times equal to the *index* (3).	4^3 or 4 to the power of 3 is $4 \times 4 \times 4 = 64$
precision of an instrument	• Considered to be the size of the smallest *unit* on the *scale* of the instrument.	The ruler has a precision of 0.1 cm. 
previous	• The one before.	If the current year is 2011, the previous year was 2010.
prime factor	• A *factor* that is also a *prime number*. *Factor trees* can help to determine a number's prime factors.	The prime factors of 30 are 2, 3 and 5. 
prime factorisation	• Writing a *whole number* as the *product* of its *prime factors*.	Prime factorisation of 30: $30 = 2 \times 3 \times 5$
prime number	• A *whole number* that has exactly two *factors*, 1 and itself. • 1 is not a prime number.	59 is a prime number as its only factors are 1 and 59. The prime numbers between 0 and 100 are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89 and 97.

prism

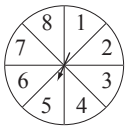
• A *three-dimensional* shape.
Two *parallel bases* are the same.

prism	Properties	Number of			Examples
		Faces	Edges	Vertices	
Triangular Prism	Bases are triangles Lateral faces are rectangles	5	9	6	
Square Prism	Bases are squares Lateral faces are rectangles	6	12	8	
Rectangular Prism	Bases are rectangles Lateral faces are rectangles	6	12	8	
Pentagonal Prism	Bases are pentagons Lateral faces are rectangles	7	15	10	
Hexagonal Prism	Bases are hexagons Lateral faces are rectangles	8	18	12	

probability

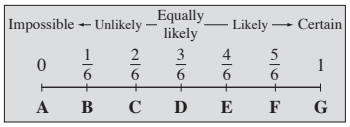
• The likelihood that an event will happen, measured as a *fraction* of the total of possible outcomes.
See *chance*.

The probability of spinning the number 5 is $\frac{1}{8}$.



probability scale

• A measure, from 0 (no chance) to 1 (will happen), of the likelihood of an event occurring.



product

• The result when two or more numbers are *multiplied*.

The product of 4 and 5 is 20:
$4 \times 5 = 5 \times 4 = 20$

profit (money)

• What is gained, less any *expenses*.
Profit = Revenue − Expense.

Revenue from a business activity is $20.
If the expenses are $15 then the profit would be $5.

proper fraction

• Any *fraction* in which the *numerator* is *less than* the *denominator*.

$\frac{5}{8}$ the numerator is 5
the denominator is 8.
$5 < 8$ so
$\frac{5}{8}$ is a proper fraction.

$\frac{5}{8}$

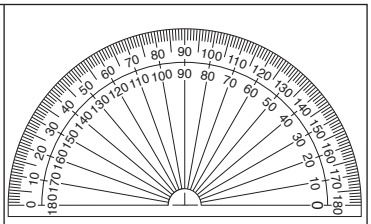
proportion

• A comparative *ratio*, showing that two ratios are equivalent.

$\frac{2}{3} = \frac{6}{9}$ is a proportion.
2 : 3 is the same ratio as 6 : 9
2 : 3 is in proportion with 6 : 9

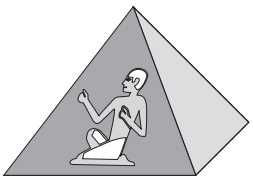
protractor

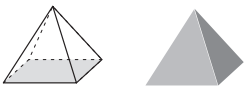
• A *semi-circular* tool used to measure *degrees*.
There are 180° on a protractor.



pyramid

• A *three-dimensional* shape.
One *base* is a *polygon*.
All other *faces* are *triangles* that meet at one point called *vertex*.
A pyramid is named for the shape of its base.

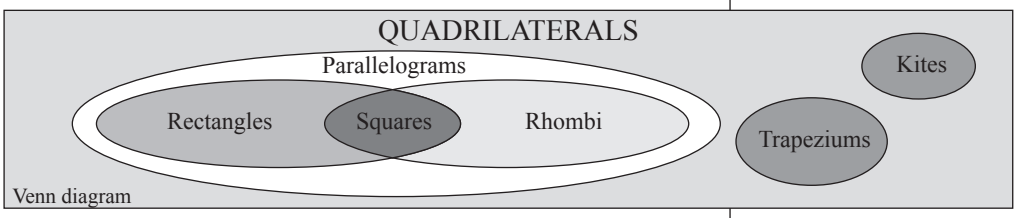


pyramid	Properties	Number of			Examples
		Faces	Edges	Vertices	
Triangular Pyramid	Base is a triangle Lateral faces are triangles	4	6	4	
Square Pyramid	Base is a square Lateral faces are triangles	5	8	5	
Rectangular Pyramid	Base is a rectangle Lateral faces are triangles	5	8	5	
Pentagonal Pyramid	Base is a pentagon Lateral faces are triangles	6	10	6	
Hexagonal Pyramid	Base is a hexagon Lateral faces are triangles	7	12	7	

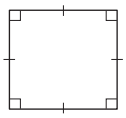
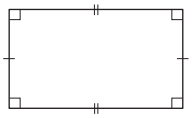
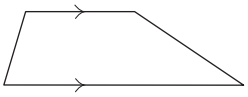
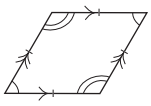
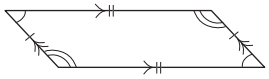
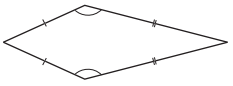
quadrilateral

• A *polygon* with 4 *sides*.

'Quad' means 4 and 'lateral' means side.

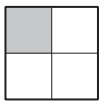


Venn diagram

quadrilateral	Sides	Interior angles	Diagonals	Axes of symmetry	Diagram
Square	4 sides of equal length	4 right angles	2 diagonals equal in length and bisecting at right angles	4	
Rectangle	Opposite sides of equal length	4 right angles	2 diagonals equal in length and bisecting each other	2	
Trapezium	2 opposite sides parallel		2 diagonals	0	
Rhombus	4 sides of equal length and opposite sides parallel	Opposite angles equal	2 diagonals bisecting at right angles	2	
Parallelogram	Opposite sides of equal length and parallel	Opposite angles equal	2 diagonals bisecting each other	0	
Kite	4 sides, two each of equal length	One pair of opposite angles equal	2 diagonals bisecting each other	1	

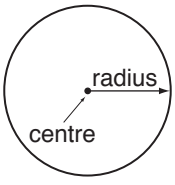
quarter

• One of four *equal* parts of a group or object.
• Written as the *fraction* $\frac{1}{4}$.



radius of a circle

• (pl. **radii**) The distance from the *centre* to any *point* on the *circle*.



random sample

• A selection taken from a group without method or conscious choice.

Drawing out of a hat is a random selection.

range	• The *difference* between the greatest and the smallest value.	For the data: 21, 24, 25, 27, 27 and 28 the range is 28 – 21 = 7
rate	• The *ratio* of two measures that have different *units*.	When running, calories burn at a rate of 14 cal/min.
ratio	• The ratio of a number (a) to a non-zero number (b) is the result when a is *divided* by b. The ratio of a to b can be written as: $\frac{a}{b}$, $a:b$ or 'a to b'. A ratio is made by comparing quantities using the same *unit* e.g. parts, buckets or litres.	If the ratio of cordial to water is 3 : 1 then that would mean 3 parts cordial to 1 part water! Agh, the order of the ratio matters. Map scales are an example of a ratio. See also *ratio scale* and *scale*.
ratio scale	• A *scale* written as a *ratio*. Compares the dimensions on a *map* or model (first number) to real life (second number).	If the scale on a map is 1 : 10 000 1 cm represents 10 000 cm. 1 cm represents 100 m. Every cm on the drawing represents 100 m in real life.
rational number ($\mathbb{Q}$)	• All *positive* and *negative fractions*, including *integers* and *improper fractions*. • Not an *irrational number*.	$-2\frac{3}{7}$, 3.010101..., $\frac{4}{10}$, 0.56, $\sqrt{\frac{4}{9}}$
real number ($\mathbb{R}$)	• Any number on the *number line*. • Includes all *rational* and *irrational numbers*.	

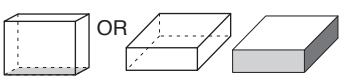
$\mathbb{R}$ **REAL NUMBERS**

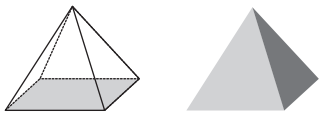
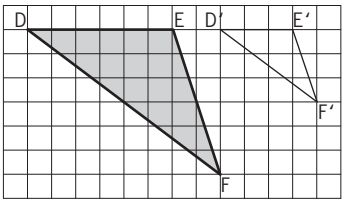
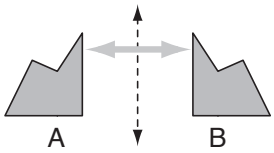
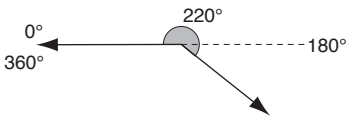
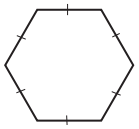
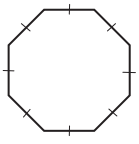
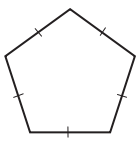
IRRATIONAL
π, φ, e, $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, 2.6293045632....
cos 30°

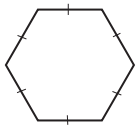
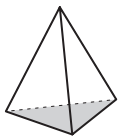
$\mathbb{Q}$
RATIONAL
$-2\frac{3}{7}$, 3.010101..., $\frac{4}{10}$, 0.56, $\sqrt{\frac{4}{9}}$

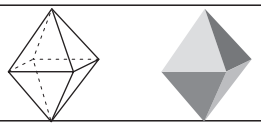
$\mathbb{Z}$
Integers
..., –3, –2, –1, 0, 1, 2, 3, ...

$\mathbb{N}$
Natural (Whole Numbers)
0, 1, 2, 3, 4, 5, 6, ...

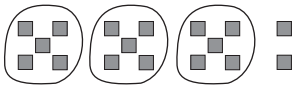
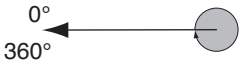
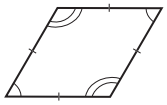
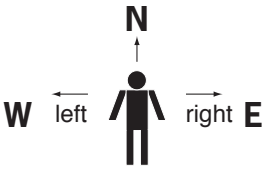
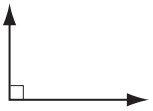
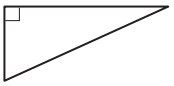
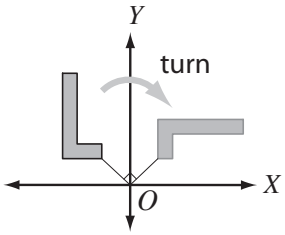
reciprocal	• One of two numbers whose *product* is 1. • Also called the multiplicative *inverse*.	The reciprocal of $\frac{3}{5}$ is $\frac{5}{3}$. $\frac{3}{5} \times \frac{5}{3} = 1$
rectangle	• A special *parallelogram*. Four *right angles*.	
rectangular prism	• A *three-dimensional* shape. Six rectangular faces.	

rectangular pyramid	• A *three-dimensional* shape. One *rectangular base*. All the other *faces* are *triangles*.	
recurring decimal	• A *decimal* that has a repeating *digit* or a repeating pattern of digits. • A repeating digit/s is marked with a dot (•) or a bar (−).	$\frac{2}{9} = 0.22222222 = 0.\dot{2}$ $\frac{1}{6} = 0.1666666 = 0.1\dot{6}$ are repeating decimals, where 2 and 6 are the repeating digits respectively. $\frac{1}{11} = 0.09090909 = 0.\overline{09}$ is a repeating decimal, where 09 is the repeating pattern of digits.
reduction	• Make smaller or decrease.	ΔDEF was reduced to ΔD′E′F′ by a scale factor of 2. 
reflection	• A movement that *flips* a figure across a *line* so that the figure is in the mirror image *position*.	Shape B is a reflection of shape A. 
reflex angle	• An *angle* measuring greater than 180° and less than 360°.	
regular hexagon	• A *polygon* with six sides of equal length and six equal angles.	 Regular hexagon
regular octagon	• A *polygon* with eight sides of equal length and eight equal angles.	 Regular octagon
regular pentagon	• A *polygon* with five sides of equal length and five equal angles.	 Regular pentagon

regular polygon	• A shape with all *side*s and all *angles equal*.	A regular hexagon has 6 equal sides and 6 equal angles.  Regular hexagon
regular prism	• A *three-dimensional* shape with *bases* that are *regular polygons* and all the other faces that are rectangles.	A regular hexagonal prism has regular hexagons as its bases.
regular pyramid	• A *three-dimensional* shape with only one *base* which is a regular *polygon* and all the other *faces* that are *isosceles triangles*. The base gives the pyramid its name, e.g. regular 'triangular' pyramid.	This regular triangular pyramid has an equilateral triangle as its base. 
regular solid	• A *three-dimensional* shape that encloses a part of space, with all faces being *regular polygons*.	

regular solid	Properties All faces are regular polygons	*In any polyhedron:* $E = F + V - 2$ Number of			Examples
		Faces	Edges	Vertices	
Tetrahedron	All faces are equilateral triangles	4	6	4	
Hexahedron	All faces are squares	6	12	8	
Octahedron	All faces are equilateral triangles	8	12	6	
Dodecahedron	All faces are regular pentagons	12	30	20	
Icosahedron	All faces are equilateral triangles	20	38	20	

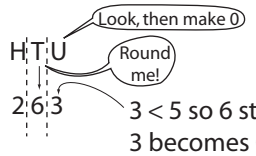
regular square pyramid	• A *pyramid* whose *base* is a *square* and whose *height* intersects the base at its centre. • All 4 *slant heights* and 4 vertical edges are congruent.
regular tetrahedron	• A *triangular pyramid* whose four *faces* are equal *equilateral triangles*.

remainder	• The amount left over when one number cannot be *divided* exactly by another.	17 ÷ 5 = 3 with 2 remainder. 
reversible	• Able to be turned in the *opposite* way.	The process of freezing the water is reversible: water ⟶ ice ⟶ water
revolution	• A complete turn. • An *angle* measuring 360°.	
rhombus	• (pl. **rhombi**) A special *parallelogram*. Four *equal sides*. *Opposite angles equal*.	
right	• The *direction* to the *east* of your body if you are facing *north*.	
right angle	• An *angle* measuring exactly 90°. It is marked with a corner.	
right-angled triangle	• A *triangle* with one *right angle*.	
Roman numerals	• Number system invented by the ancient Romans.	I = 1 V = 5 X = 10 L = 50 C = 100 D = 500 M = 1000
rotation	• A movement that turns a shape about a fixed *point* (the centre of rotation) by a given *angle* (the angle of rotation).	The centre of rotation is the origin *O* and the angle of rotation is 90°. 
rotational symmetry	• A shape has rotational symmetry if a *rotation* of 180° or less produces an image that fits exactly on the original shape.	This shape has rotational symmetry, because after a rotation of 120° it looks identical to the original. 

round

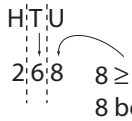
• To *approximate* a number to a given *place value*.
Look at the next *digit* after the given place value you are rounding to.
If this digit is less than 5, keep the digit in the given place value the same.
If this digit is greater than or equal to 5, add 1 to the digit in the given place value.
Then make the *digit* you were looking at, zero.

Round 263 to the nearest 10:



3 < 5 so 6 stays
3 becomes 0
263 ≈ 260

Round 268 to the nearest 10:



8 ≥ 5 so add 1 to 6
8 becomes 0
268 ≈ 270

row of a table

• A *horizontal* line of *data* in a table.

Medal Tally - Beijing Olympics 2008

COUNTRY	Gold	Silver	Bronze
China	51	21	28
United States	36	38	36
Russia	23	21	28
Great Britain	19	13	15
Germany	16	10	15
Australia	14	15	17

rule

• A relationship or correspondence in which values of one *variable* determine the values of another: y = rule.

$y = x^2 - 4$
See *linear rule*.

sample

• A selection taken from a group or *population*.

See *random sample*.

sample space

• The *set* of all possible *outcomes* of an *experiment*.

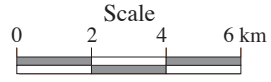
A coin is flipped -
Sample space = {HH, HT, TH, TT}

Possible outcomes (sample space)		Coin 1	
		H	**T**
Coin 2	**H**	H,H	H,T
	T	T,H	T,T

scale

• A key on a *scale drawing*/map that tells how the drawing's *dimensions* and life size dimensions are related.
Can be written as:
1) A *ratio scale* with the first number referring to the map distance and the second number referring to the real distance.
OR
2) A *linear scale* with a set of marks on a line.

On a map with a ratio scale of 1 : 10 000
1 cm represents 10 000 cm or 100 m.
Every centimetre on the drawing represents 100 m in real life.



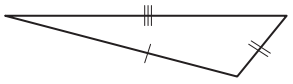
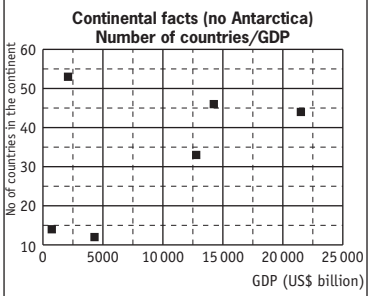
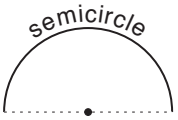
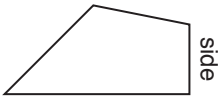
On a map with this linear scale, every highlighted segment represents 2 km in real life.

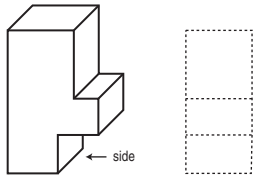
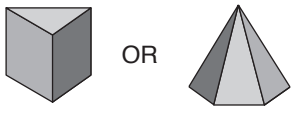
scale drawing

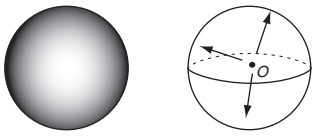
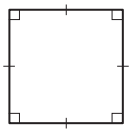
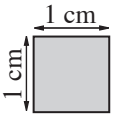
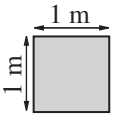
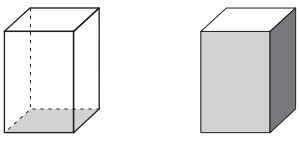
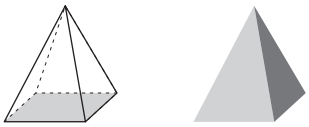
• Changing the size of an object but not the shape.

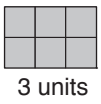
A life size staple.

The staple scaled by 50%.

scale factor	• The amount used to *enlarge*, *reduce* or find the original size of an object.	To make an object 2 times bigger or 200% of the original size, enlarge the object by a scale factor 2 : 1 To do this multiply each dimension by the fraction $\frac{2}{1}$. To make an object 2 times smaller or 50% of the original size, reduce the object by a scale factor 1 : 2 To do this multiply each dimension by the fraction $\frac{1}{2}$.
scalene triangle	• A *triangle* in which all three sides are a different length.	
scatter plot	• A *graph* in which two sets of data are plotted as ordered pairs in a *coordinate plane*.	
second (s)	• A very short unit of *time*.	There are 60 seconds in 1 minute.
second	• The *position* after *first*.	1st, **2nd**.....
segment	• Two *points* and all points on the *line* between the two points. Part of a line.	Segment $\overline{AB}$ 
semicircle	• Half of a circle.	
sequence of numbers	• A list of numbers that follows a certain *rule*. Each number is called a *term*.	35, 30, 25, 20, … In this sequence of numbers, the next three are 15, 10 and 5.
seventh	• The *position* after *sixth*.	1st, 2nd, 3rd, 4th, 5th, 6th, **7th**.....
shortest	• Having the smallest *length*.	Sam is the shortest in the class.
side	• One of the lines that form a *polygon*.	

side view	• What you see of an object looking from a side *perspective*. • *Three-dimensional* objects have 3 views: front, top and side.	
sign	• The *positive* or *negative* indicator attached to any *real number* that is *greater than* or *less than* zero respectively.	+ positive sign − negative sign
similar shapes	• Shapes that are identical but not necessarily in size.	These stars are similar. 
simplest form of a fraction	• A *fraction* is in simplest form when the only number that divides into both the *numerator* and the *denominator* is 1.	The simplest form of $\frac{6}{9}$ is $\frac{2}{3}$ (Divide 6 and 9 by 3. 2 and 3 can only be divided by 1 so they cannot be reduced.)
simplify	• To reduce to the *simplest form*.	To simplify the ratio 14 : 6 divide both sides by 2. 14 : 6 simplified is 7 : 3.
sixth	• The *position* after *fifth*.	1st, 2nd, 3rd, 4th, 5th, **6th**.....
size	• How big an object is.	The size of the wave is 2 m. 
slide	• Move without changing *direction*. See *translation*.	
smallest to largest	• Ranking in order from the littlest to the biggest.	 1st 2nd 3rd 4th
solid	• A *three-dimensional* shape that encloses a part of space.	
south	• A *compass direction*.	
south-east	• A *compass direction*.	

south-west	• A *compass direction*.	
speed	• The *rate* at which an object moves. Speed is worked out by dividing the distance traveled by the time taken. We call this average speed $v = \frac{d}{t}$	The average speed for a car which travels 150 km in 3 hours is: $v = \frac{\text{distance}}{\text{time}} = \frac{150}{3} = 50$ km/h
sphere	• A *set* of *points* in space of equal distance from the central point.	
square	• A *rectangle* with all *sides* of equal length.	
square centimetre (cm^2)	• A *unit* of *area* equal to 1 *centimetre* by 1 centimetre.	
square metre (m^2)	• A *unit* of *area* equal to 1 *metre* by 1 metre.	
square number	• A number that results from multiplying another number by itself.	9, 6.25 and $\frac{4}{9}$ are all square numbers. $9 = 3 \times 3$ $6.25 = 2.5 \times 2.5$ $\frac{4}{9} = \frac{2}{3} \times \frac{2}{3}$
square prism	• A *three-dimensional* shape. Two identical square *bases*. All the other faces are *rectangles*.	
square pyramid	• A *three-dimensional* shape. One square *base*. All the other faces are *triangles*.	
square root of a number ($\sqrt{\ }$)	• A *number* which, when *multiplied* by itself, gives the original number. Finding the square root of a number is the *inverse operation* of squaring that number.	$\sqrt{900} = 30$ Square root of 900 is 30, because $30 \times 30 = 900$ or $30^2 = 900$

square units	• A *unit* of *area* equal to the area of a square with side lengths of 1 unit.	$A = lw$ $= 3 \times 2$ $= 6$  Area = 6 square units
squared	• Multiplied by itself. A number raised to the second *power*.	4 squared is written as 4^2 $4^2 = 4 \times 4 = 16$
statistics	• Numerical facts systematically collected, organised and analysed.	Data is collected from a sample of the population, organised into a graph and interpreted to summarise some characteristic.
stem-and-leaf plot	• A diagram displaying *data* by *place value*. The data is in order from lowest to highest.	

Data set of 13 elements: {13, 18, 18, 19, 20, 21, 21, 22, 22, 22, 29, 30, 31}

mode = 22

median (7th element) = 21

range

stem	leaves
1	3 8 8 9
2	0 1 1 2 2 2 9
3	0 1

lowest value = 13

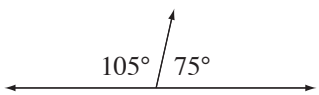
median = 21

mode = 22

highest value = 31

range = high – low
= 31 – 13
= 18

mean = 286 ÷ 13
= 22

straight angle	• An *angle* measuring 180°.	
substitute	• To replace a number or function with another. Often used in *algebra* when a *variable* (letter) is replaced by a number.	If $x = 4$, the value of $x + x$ is found by replacing the letter x with 4: $4 + 4 = 8$
subtract	• To take away or *minus*.	If you subtract 10 from 15 you are left with 5: $15 - 10 = 5$
sum	• The result when two or more numbers are added.	The sum of 20 and 6 is 26: $20 + 6 = 6 + 20 = 26$
supplement of an angle	• An *angle* that, when added to an *adjacent* angle, makes a *straight angle* (or 180° in total).	75° is the supplement of 105°, because 75° + 105° = 180° 

survey

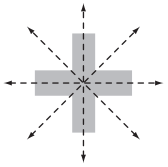
• A method of collecting a *sample* of *data* by getting people's responses.

TV ratings are determined by surveying viewers.

symmetry

• A shape has a *line of symmetry* when a line can be drawn through the shape so that one side of the shape is the mirror image of the other.

There are 3 kinds of symmetry:
horizontal symmetry
vertical symmetry
rotational symmetry



table

• *Data* organised in *columns* and *rows*.

Medal Tally - Beijing Olympics 2008

COUNTRY	Gold	Silver	Bronze
China	51	21	28
United States	36	38	36
Russia	23	21	28
Great Britain	19	13	15
Germany	16	10	15
Australia	14	15	17

table of values

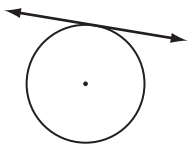
• A list of numbers that are used to *substitute* one *variable* (x) in a *rule* or *function*, to find the *value* of the other variable (y).

$y = x + 4$

x	$y = x + 4$	y
1	$1 + 4 = 5$	5
2	$2 + 4 = 6$	6
3	$3 + 4 = 7$	7
4	$4 + 4 = 8$	8
5	$5 + 4 = 9$	9
6	$6 + 4 = 10$	10

tangent to a circle

• A *line* that touches the *circle* at a *point* without crossing over.



tax

• A financial charge imposed by the state often calculated as a *percentage*.

If a sales tax of 6% is applied on a purchase of $100, the total amount that must be paid is $106.

temperature

• How hot or cold a thing is.
• Temperature is measured in *degrees Celsius* (°C) with a *thermometer*.

99.97°C is the temperature at which water boils.

tens

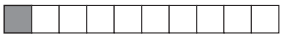
• The *place value* between the *units* and *hundreds*.

1825.763 has 2 tens.

thousands	*hundreds*	*tens*	*units*	*tenths*	*hundredths*	*thousandths*
1	*8*	*2*	*5*	*7*	*6*	*3*

tenth

• One part out of 10 parts of one whole.



tenths

• The *place value* after the decimal point between the *units* and *hundredths*.

1825.763 has 7 tenths.

thousands	*hundreds*	*tens*	*units*	*tenths*	*hundredths*	*thousandths*
1	8	2	5 .	7	6	3

term

• Any part of an expression separated by "+" or "–" signs.
• A term can be a:
  a) *constant (number)*
  b) single letter or *variable*
  c) *product* of a number and a variable
  d) product of a number and two or more variables

$a + a + a + a + a = 5 \times a = 5a$
We simplify the writing by removing the "×" sign.
We read this as "five a".

$a = 1 \times a = 1a = a$
We simplify the writing by removing the "1" and the "×" sign.
We read this as "a".

a) 7, $\frac{1}{3}$ or -18
b) a, b or $-c$
c) $7a, \frac{1}{b}, -18g$ or $3x^2$
d) $7ab, 5mn^3$ or $-3jk^2$

A term that has both numerals and variables is always written with the number before the variable.

If there is more than one variable in the term then they are usually written in alphabetical order.

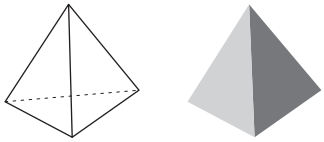
terminating decimal

• A *decimal* whose *digits* end. Every terminating decimal can be written as a *fraction* with a *denominator* of 10, 100 or 1000 etc.

$0.765 = \frac{765}{1000}$

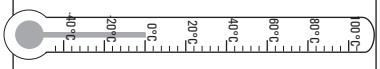
tetrahedron

• A *triangular pyramid*.
See also regular tetrahedron.



thermometer

• An instrument used to measure *temperature*.



third

• The *position* after *second*.

1st, 2nd, **3rd**.....

thousands

• The *place value* between *hundreds* and tens of thousands.

1825.763 has 1 thousand.

thousands	*hundreds*	*tens*	*units*	*tenths*	*hundredths*	*thousandths*
1	8	2	5 .	7	6	3

thousandth

• One part out of 1000 parts of one whole.

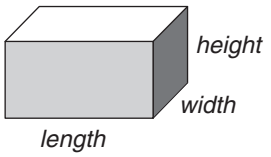
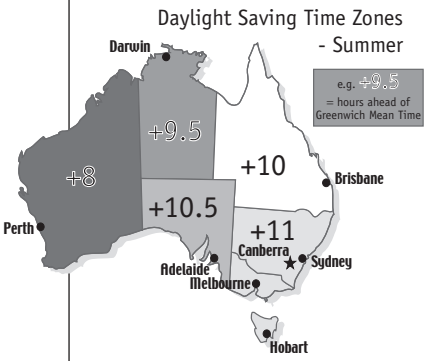
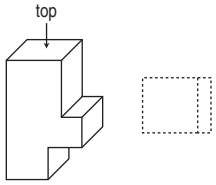
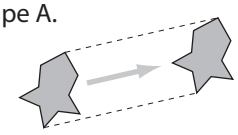
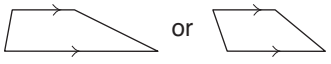
One gram is a thousandth of a kilogram.

thousandths

• The *place value* after *hundredths*.

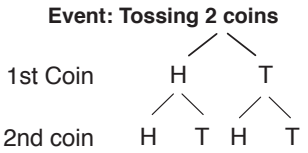
1825.763 has 3 thousandths.

thousands	*hundreds*	*tens*	*units*	*tenths*	*hundredths*	*thousandths*
1	8	2	5 .	7	6	3

three-dimensional (3D)	• Able to be measured in three directions namely *length*, *width* and *height*.	
time	• The continuum from past to present to future.	The time is 9:25 am.
time zone	• Regions of different *times* around the world. Based on Greenwich Mean Time (GMT), each 15° of longitude away from Greenwich, England represents 1 hour of time.	NSW time is 3 hours ahead of WA time during daylight saving. 
tip	• Optional payment given in addition to a required payment, usually to express appreciation for excellent service.	The tip added an extra 5% to the cost of the meal.
tonne (t)	• A *unit* of *measurement* for *mass equal* to 1000 *kilograms*.	The humpback whale can weigh 58 tonnes.
top view	• What you see of an object looking from a top *perspective*. • *Three-dimensional* objects have 3 views: front, top and side.	
total	• The whole lot. • The *sum* of two or more quantities.	The total of 2 and 7 and 3 is 12: 2 + 7 + 3 = 12
transformation	• A movement of a shape in a *coordinate plane*. Types of transformations are *translations*, *reflections* and *rotations*.	See *translation*, *reflection* and *rotation*.
translation	• A movement that *slides* a shape. Each *point* of the shape is moved the same distance, in the same direction, to produce a shape that is *congruent* to the original one.	Shape B is a translation of shape A. 
trapezium	• A *quadrilateral*. Two *opposite sides* are *parallel*.	

tree diagram

• A tree diagram displays all the possible *outcomes* of an *event*.

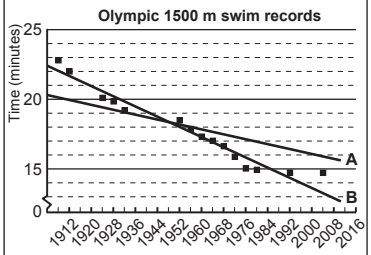


When tossing 2 coins there are 4 possible outcomes (branches):
HH, HT, TH, TT - sample space

trend line

• A straight or curved *line* which is closest to all the *data* points in a *scatter plot* and gives the best approximation to the trend of the *set* of data.
• A line which goes through the 'middle' of the data points so that the *sums* of the distances from the points above and below the line, to the line, are *approximately equal*.

Line B is a line of best fit, being closest to all the data points.



tri

• Prefix meaning three.

A tricycle has 3 wheels.

trial and error

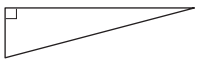
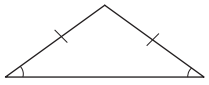
• To try repeatedly and learn from mistakes.

This sum can be solved using trial and error.

$$\begin{array}{r} \text{TWO} \\ +\,\text{TWO} \\ \hline \text{FOUR} \end{array}$$

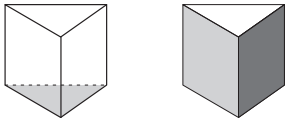
triangle

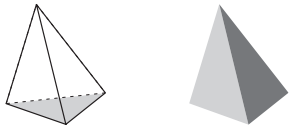
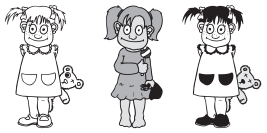
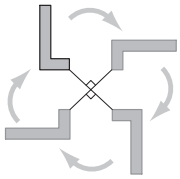
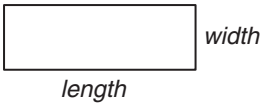
• A *polygon* with 3 straight *sides*.

triangle	Interior angles	Sides	Diagram
Right-angled triangle	1 right angle		
Scalene triangle	0 equal angles	0 sides of equal length	
Isosceles triangle	2 equal angles	2 sides of equal length	
Equilateral triangle	3 equal angles	3 sides of equal length	

triangular prism

• A *three-dimensional* shape.
Two identical triangular *bases*.
Three rectangular faces.



triangular pyramid	• A *three-dimensional* shape. One triangular *base*. The other three faces are *triangles*.	
triple	• Multiply by three.	Children × 3 = triplets! 
turn	• To *rotate* about a point.	
twenty-four hour time	• Time told in 24 hour lots using 4 *digits*.	Nine thirty am is 0930 or 09:30 Two thirty pm is 1430 or 14:30
twice	• Two times.	Sam has $5 and Jo has $10. Jo has twice as much as Sam.
two-dimensional (2D)	• Able to be measured in 2 *directions* (*length* and *width*).	
two-way table	• A table that shows the combinations of possible outcomes and their values.	Possible outcomes when spinning a spinner labelled 1, 2, 3, 4 and flipping a coin. 
unit	• One.	The unit of measurement for length is metre (m).
units	• The *place value* before the decimal point between the *tens* and *tenths*.	1825.763 has 5 units.

Possible outcomes (sample space)

Coin	Spinner 1	2	3	4
H	H,1	H,2	H,3	H,4
T	T,1	T,2	T,3	T,4

thousands	*hundreds*	*tens*	*units*	*tenths*	*hundredths*	*thousandths*
1	*8*	*2*	*5*	*7*	*6*	*3*

units of measurement

• Standard amount or quantity.

See *cubic unit* and *square unit.*

metric units	*Abbreviation*	*Examples*	*Used for measuring.....*
• millimetre	mm	thickness of a plank of wood	LENGTH distance - length, width, height, diameter, perimeter
• centimetre	cm	width of a photo frame	
• metre	m	length of a lap of a stadium	
• kilometre	km	distance between two cities	
• gram	g	weight of an egg	MASS weight - people, animals, objects
• kilogram	kg	weight of a bag of apples	
• tonne	t	weight of an elephant	
• millilitre	mL	liquid in a can	CAPACITY *(Liquid Volume)* quantity - liquids
• litre	L	liquid in a bucket	
• square centimetre	cm^2	area of a Math book cover	AREA surface - objects, territories (countries, continents, oceans)
• square metre	m^2	area of the gym floor	
• square kilometre	km^2	area of Texas	
• cubic centimetre	cm^3	volume of water in a fish tank	VOLUME quantity - air, water
• cubic metre	m^3	volume of air in a warehouse	

unlike terms

• Are *terms* that contain different *variables* raised to the different *powers*. Unlike terms cannot be *added* or *subtracted* however they may be *multiplied* and *divided*.

Opposite to *like terms.*

7, $6a$ and $-4y^3$ are not like terms.

$5w$, $\frac{6}{w}$ and $-18w^2$ are not like terms.

valid

• Grounded in *logic* or truth.

If A causes B and B causes C then it is valid to propose that A may cause C.

variable

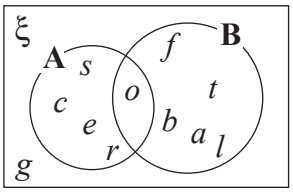
• A letter of the alphabet which stands in for a number. A variable takes the place of:
an unknown value or
a value which may change (vary) in different situations.

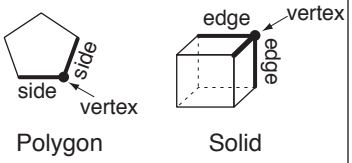
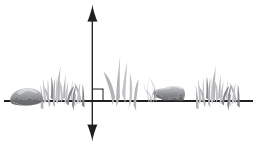
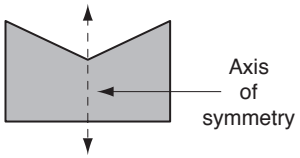
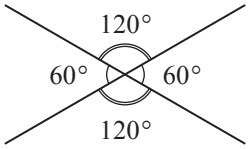
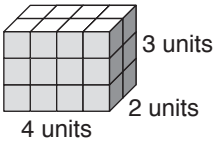
Opposite to a *constant.*

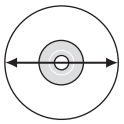
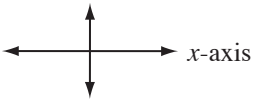
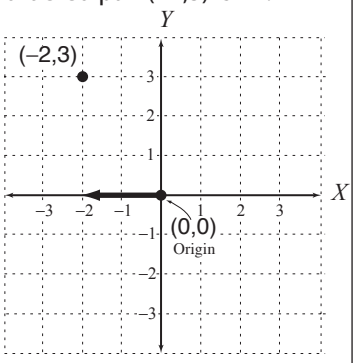
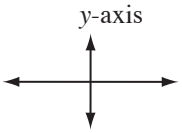
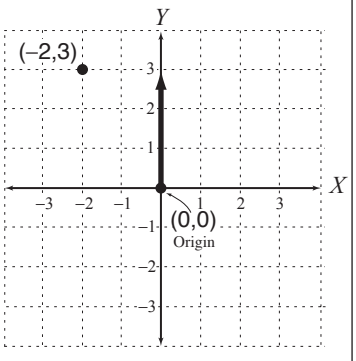
In $y = x + 5$
5 is constant
x and y are variables.

Venn diagram

• A diagram using circles to show the relationship between *sets* of objects.



vertex	• (pl. **vertices**) The point at which two *sides* (of a *polygon*) or three *edges* (of a *solid*) meet.	 Polygon Solid
vertical line	• A *line* at a *right angle* to the horizon.	
vertical symmetry	• A shape has vertical symmetry if an *axis of symmetry* is vertical.	
vertically opposite angles	• *Angles* on opposite sides of a *pair* of *intersecting lines*. • Vertical angles are *congruent*.	All vertical angles are equal in a pair of intersecting lines. 
volume	• The amount of space that a *solid* occupies. Volume is measured in *cubic units*. e.g. cubic centimetres (cm^3) or cubic metres (m^3).	Volume of a rectangular prism is calculated by multiplying length by width by height: $V = lwh$ $= 4 \times 2 \times 3$ $= 24$ Volume = 24 cubic units 
week	• A *unit* of *time* equal to 7 days; Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.	Roger was on holidays for one week (seven days).
weight	• The heaviness of an object. Equals the *mass* of an object times the force of gravity. This means that weight changes with any change in gravity.	A 3 kg brick weighs: 3 kg on Earth, about 0.5 kg on the moon, 0 kg in outer space.
west	• A *compass direction*.	The sun sets in the west. 
whole numbers	• The *counting numbers* from zero to *infinity*.	0, 1, 2, 3, 4, 5, ... are whole numbers.

width	• How wide an object is. The sideways *dimension*.	The width of the CD is 12 cm.  12 cm 
***x*-axis**	• The *horizontal* axis.	
***x*-coordinate**	• The *first* number in an ordered pair. The position of a *point* along the *x-axis*.	The *x*-coordinate of the ordered pair (–2,3) is –2. 
***y*-axis**	• The *vertical* axis.	
***y*-coordinate**	• The *second* number in an ordered pair. The position of a *point* along the *y-axis*.	The *y*-coordinate of the ordered pair (–2,3) is 3. 
year	• A *unit* of *time* equal to 365 days. (366 in a leap year).	1st of January to the 31st of December.