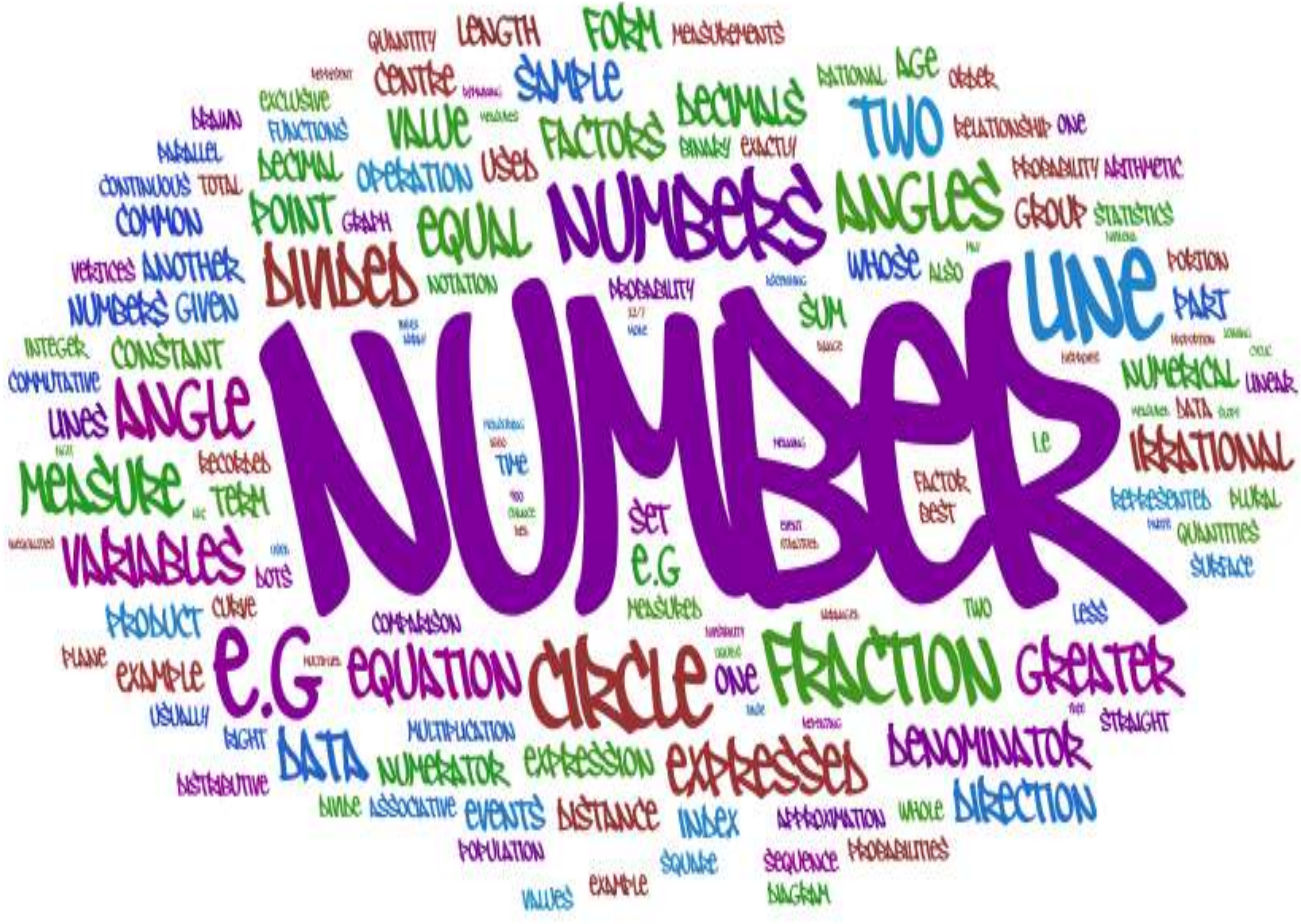

QUANTITY
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CIRCLE
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FRACTION
GREATER
EXAMPLE
USUALLY
STRAIGHT
RIGHT
MULTIPLICATION
DATA
DENOMINATOR
NUMERATOR
EXPRESSION
EXPRESSED
DISTRIBUTIVE
DIRECTION
DIVIDE
ASSOCIATIVE
EVENTS
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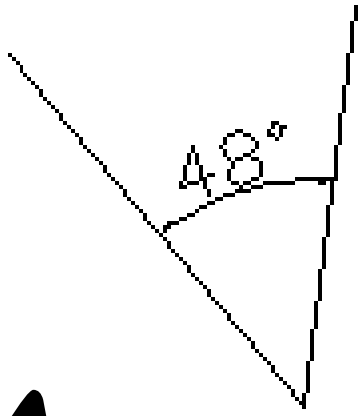
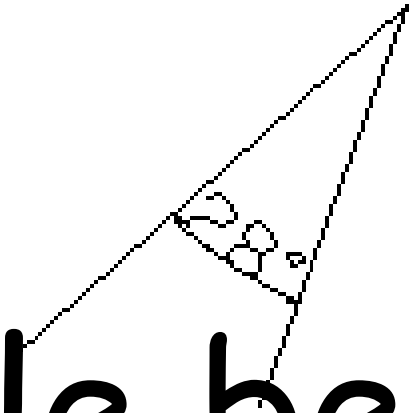
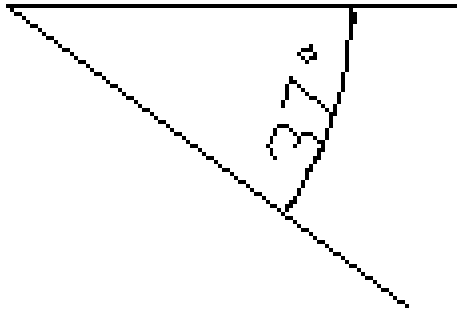
SQUARE
SEQUENCE
PROBABILITIES
EXAMPLE
VALUES
DIAGRAM

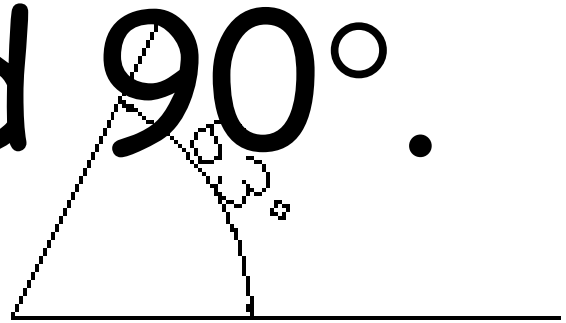
Acute

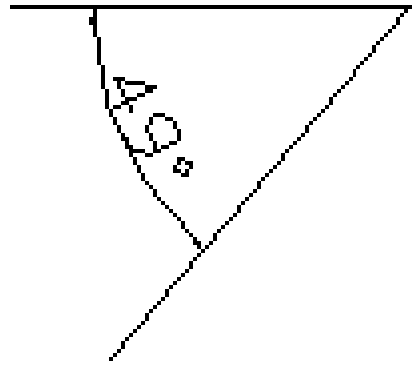




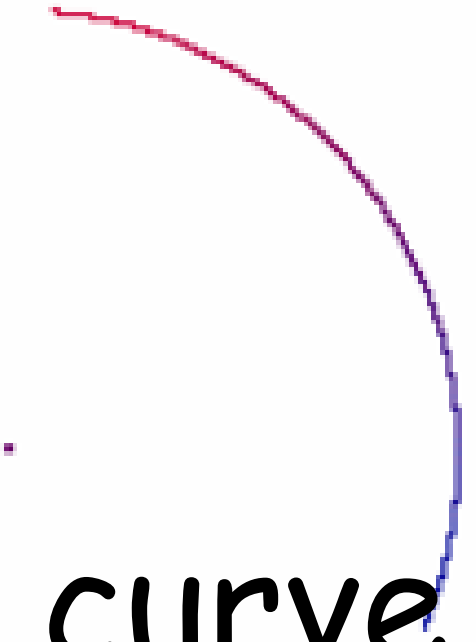


An angle between 0° and 90°.





Arc



A portion of a curve.
Often used for a portion of a circle.

Approximation

≈

A number or result that is not exact.

Associative

A binary operation $*$ on is associative if

$$a * (b * c) = (a * b) * c$$

+ & x are associative

Area

A measure of surface.

Measured in square units e.g. cm^2, m^2

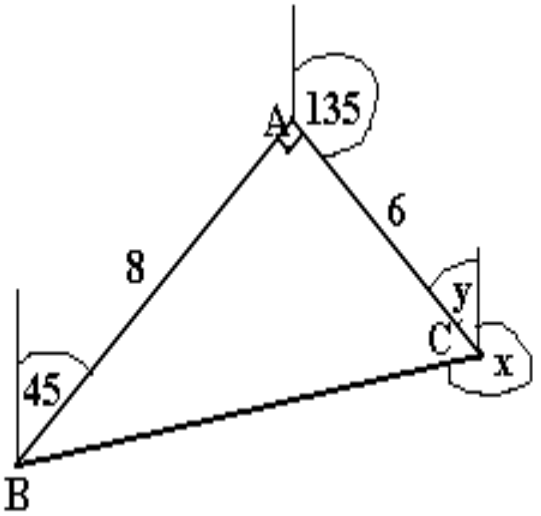
Arithmetic mean

The sum of quantities divided by the number of quantities.

Arithmetic sequence

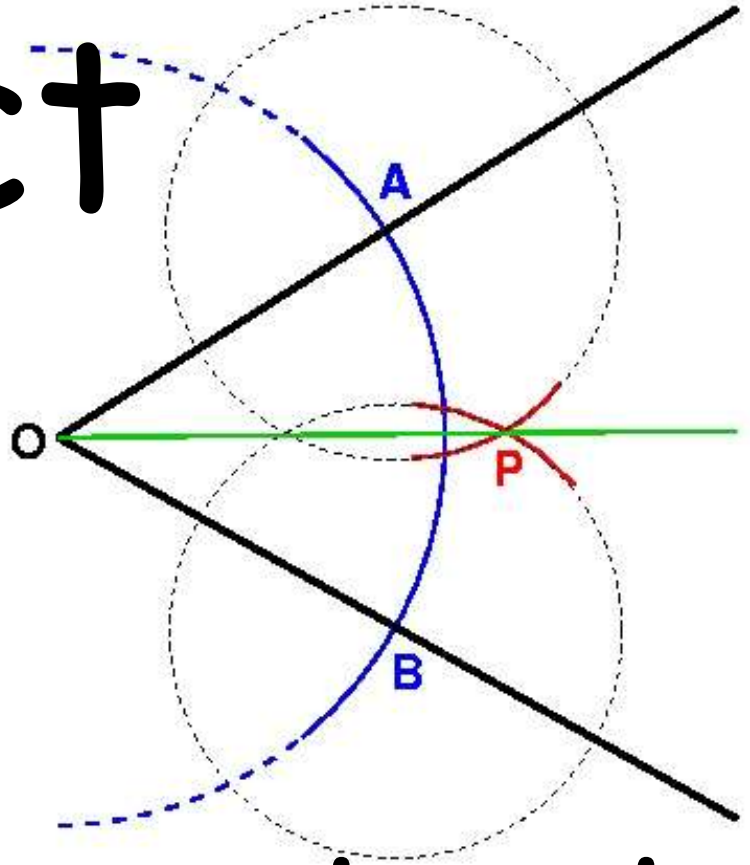
A sequence of numbers in which terms are generated by + or - a constant amount to the preceding term.

Bearing



The direction of a line given as an angle measured in degrees from north in a clockwise direction.

Bisect



In geometry, to divide into two equal parts.

Cancel (a fraction)

One way to simplify a fraction. The numerator and denominator are divided by a common factor.

Capacity

Volume, i.e. a measure of three-dimensional space, applied to liquids

Centi.

Prefix meaning one-hundredth (of)

Chord

A straight line segment joining two points on a circle.

Circumference

The length of a circle (its perimeter).

Coefficient

A factor of an algebraic term. E.g. in the term $4xy$, 4 is the numerical coefficient of xy

Commutative

A binary operation $*$ on

is commutative if

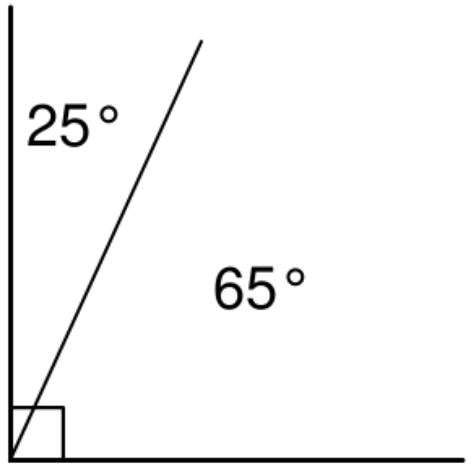
If $a * b = b * a$

+& x are commutative

Complement

In addition, a number and its complement have a given total.

Complementary angles

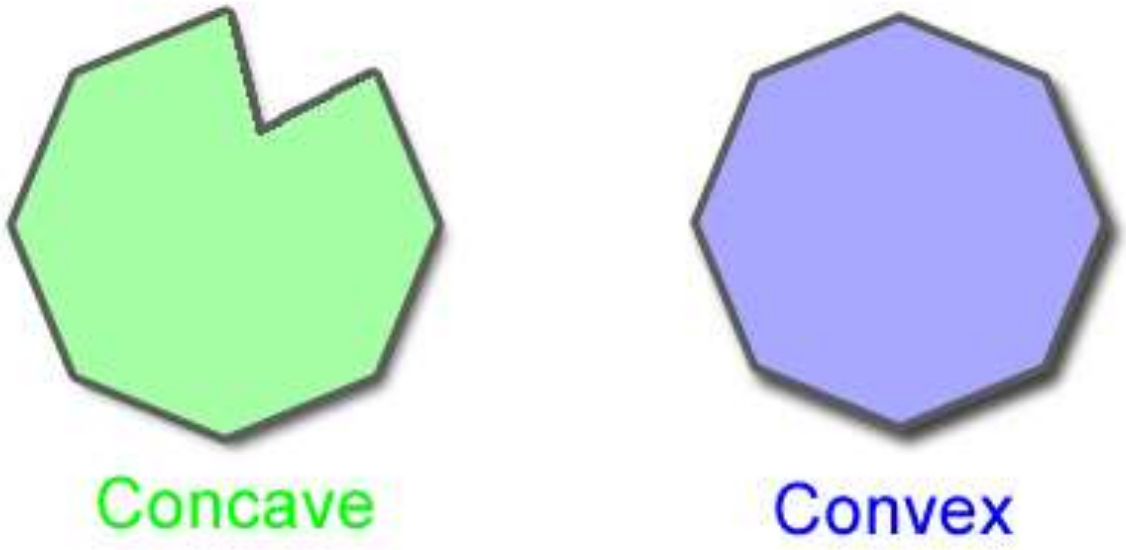


Two angles with the sum of 90°.

Compound measures

Measures with 2 or more dimensions. E.g.: speed & density

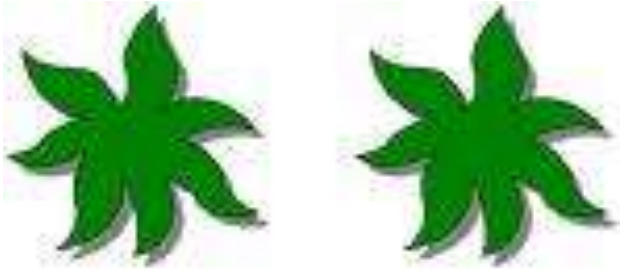
Concave



Curving inwards.

Concentric

Used to describe circles that have the same centre.

Congruent (figures) 

Shapes that are identical.

Noun: congruence.

Consecutive numbers

Are numbers that follow an order

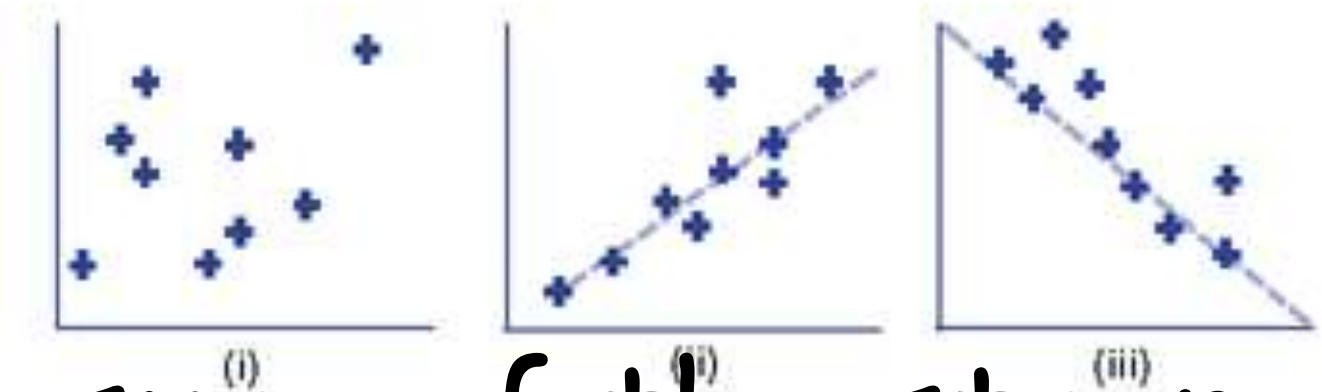
Constant

A number or quantity that does not vary. E.g.: in the equation $y = 3x + 6$, the 3 & 6 are constants, where x & y are variables.

Continuous data

Data from measurements i.e: lengths , weights which are measured. Continuous data is usually grouped e.g. $130 \leq x < 140$

Correlation



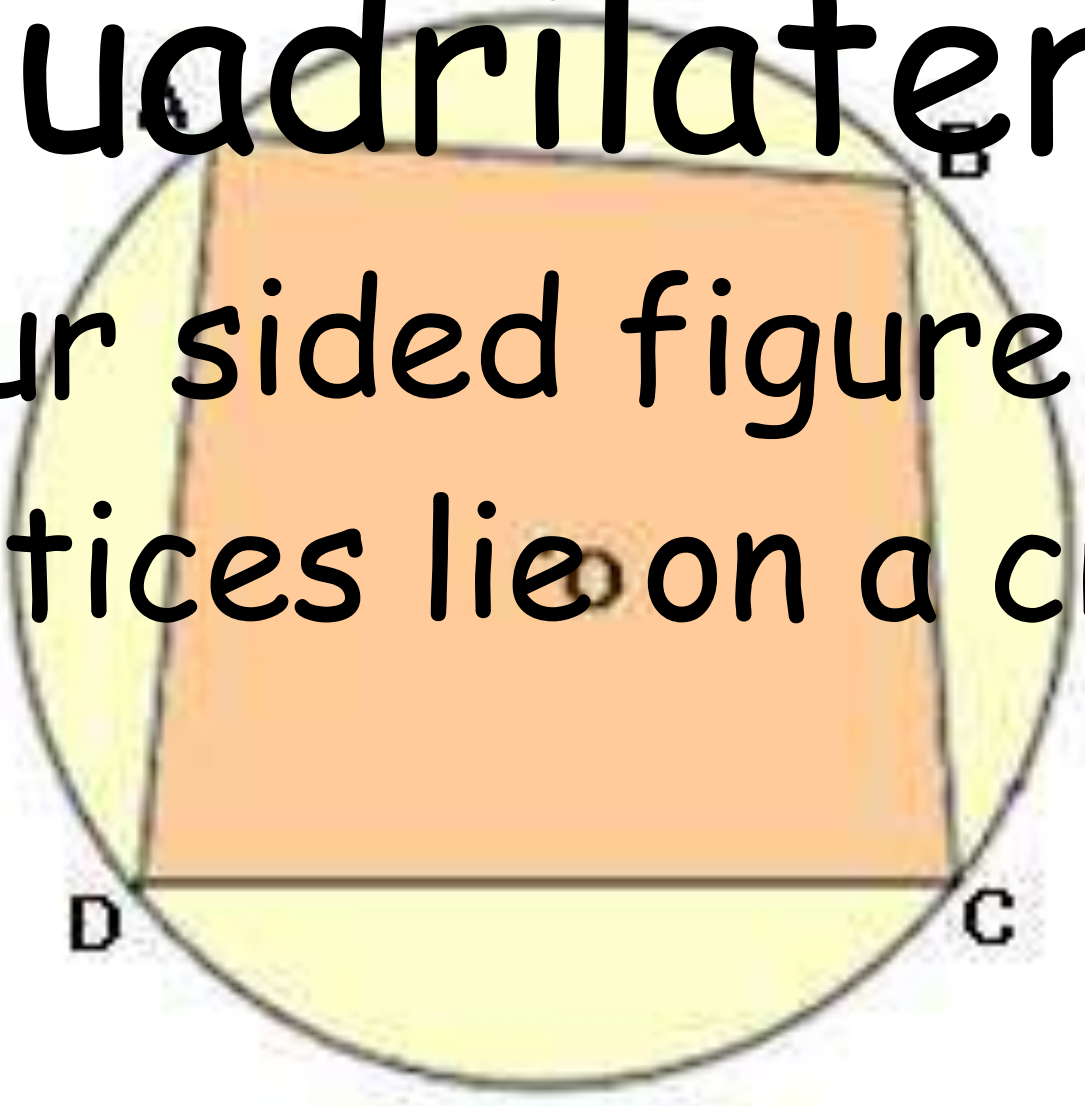
A measure of the strength of the relationship between two variables.

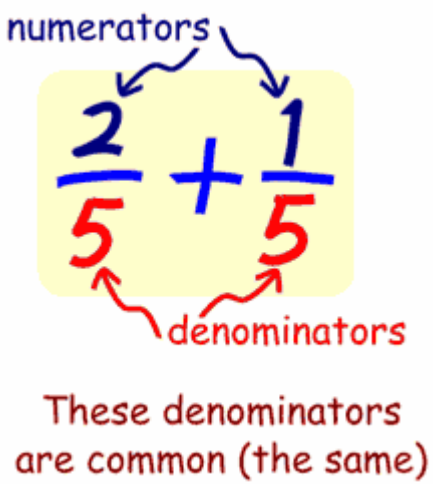
Counter example

Is a an example that clearly disproves a statement

Cyclic quadrilateral

A four sided figure whose vertices lie on a circle.

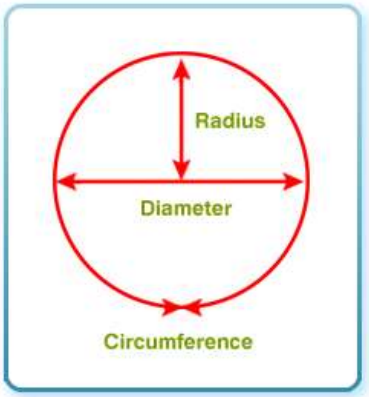




Denominator

In a fraction, the number written below the line.

Diameter



Any of the chords of a circle or sphere that pass through the centre.

Discrete data

Data that can be counted e.g.:

number of red cars

Distributive

An operation $*$ is distributive if

$$a * (b \cdot c) =$$

$$(a * b) \cdot (a * c)$$

multiplication is distributive .

Divisibility

The property of being divisible by a given number.

Divisor

The number by which another is divided.

30 ÷ 6 = 5, the divisor is 6, 30 is the Dividend and 5 is the quotient.

Exponent

Also known as index, a number, positioned above and to the right of another, indicating repeated multiplication.

Factor

Numbers that can divide exactly into a number E.g.: 1, 2,3, 4, 6 and 12 are all factors of 12

Factorise

To express a number or polynomial as the product of its factors. E.g.:

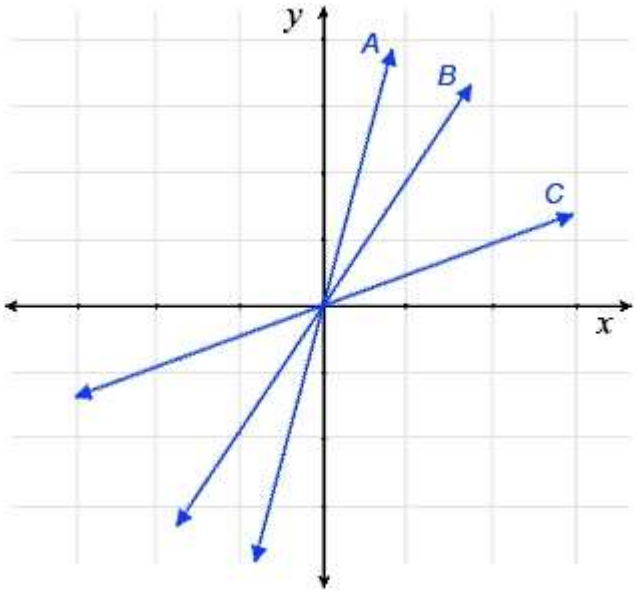
The factors of $x^2 - 4x - 21$ are $(x + 3)$ and $(x - 7)$

Formula

An equation linking sets of physical variables.

Plural: formulae.

Gradient



A measure of the slope of a line.

Identity

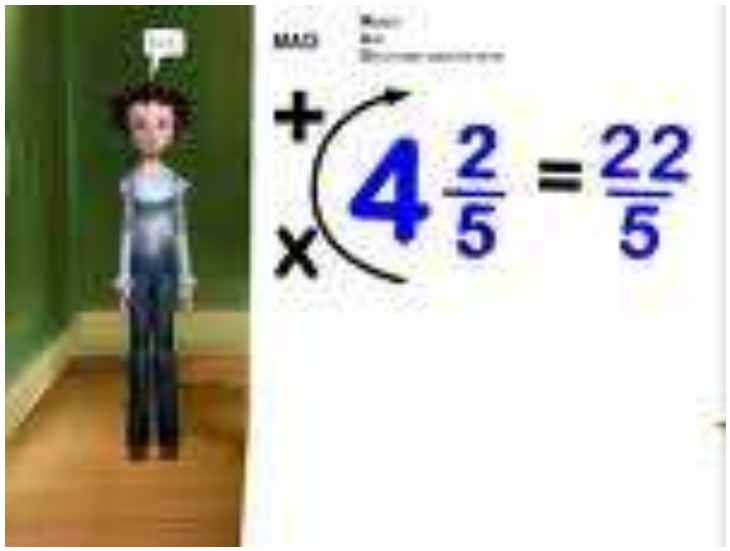
An equation that holds for all values of the variables.

The symbol $\equiv$ is used.

Example:

$a^2 - b^2 \equiv (a + b)(a - b)$.

Improper fraction



Has a numerator that is greater than its denominator.

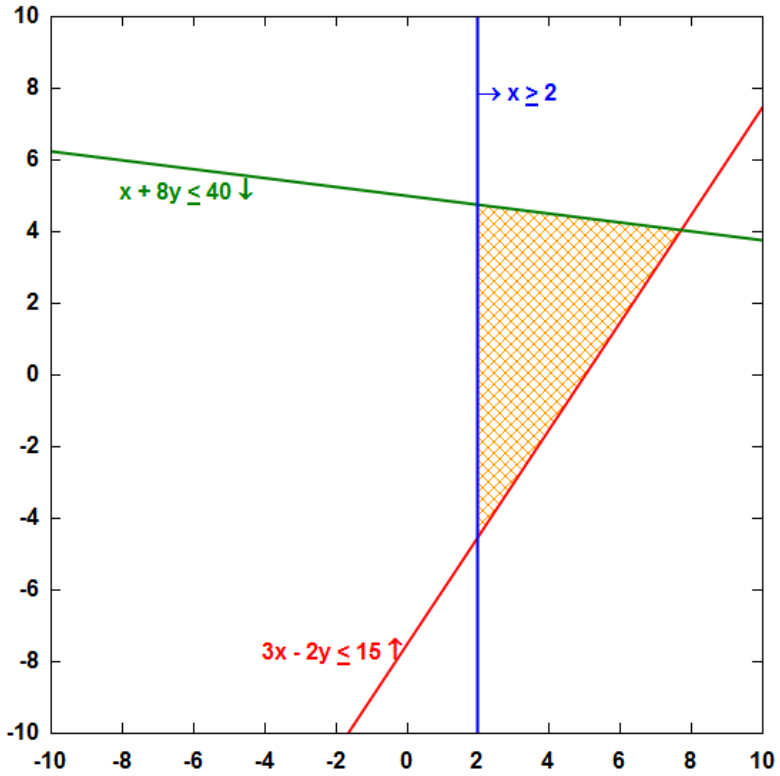
Index notation

The notation in which a product such as

$$a \times a \times a \times a$$

is recorded as a^4.

Inequality



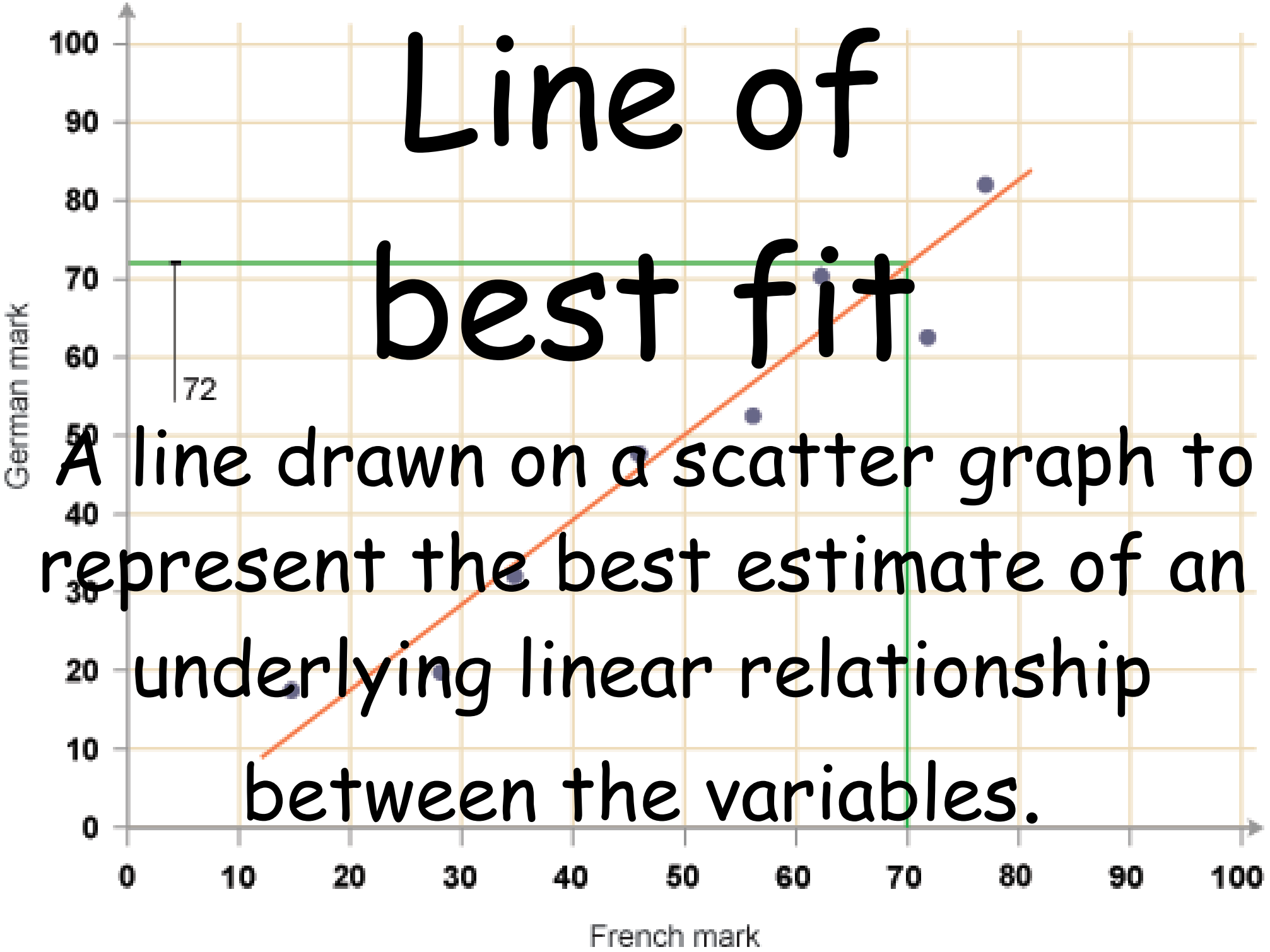
Statements such as $a \neq b$, $a \leq b$ or $a > b$ are inequalities.

Irrational number

Numbers that produce infinite, non-recurring decimals

e.g. $\sqrt{5}$ and π.

Line of best fit



A line drawn on a scatter graph to represent the best estimate of an underlying linear relationship between the variables.

Linear

In algebra, describing an expression or equation of degree one. E.g:$2x + 3y = 7$ is a linear equation & can be represented as a straight line graph.

Median

The middle number or value when all values in a set of data are arranged in ascending order.

Mode

The most commonly occurring value or class with the largest frequency.

Mutually exclusive events

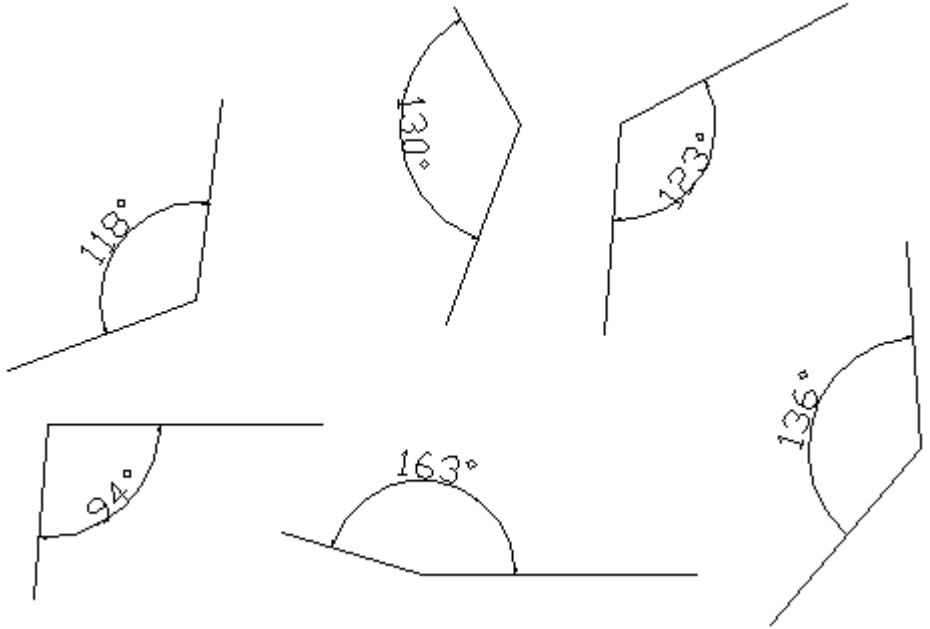
In probability, events that cannot both occur at the same time. The sum of mutually exclusive probabilities is 1.

Natural number

The counting numbers

1, 2, 3, . . etc.

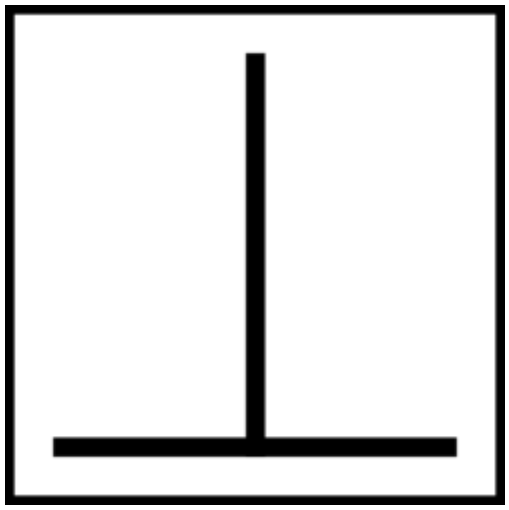
Obtuse angle



An angle greater than 90° but less than 180°.

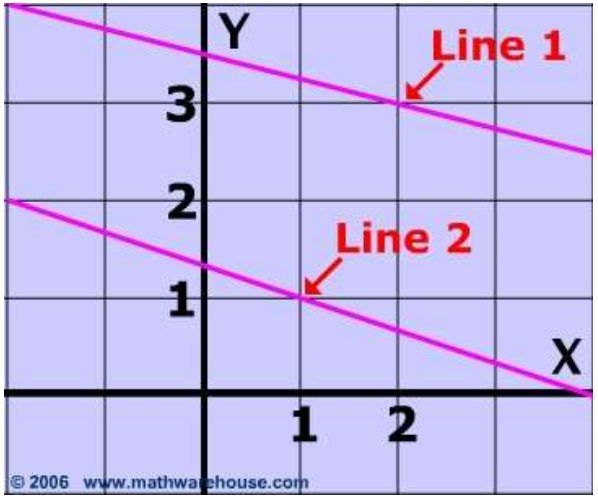
Pi

Symbol: π. The length of any circle divided by the length of its diameter is a constant, π. π is an irrational number. One common approximation for π is 22/7. 3.14159265 is a more accurate approximation, to 8 decimal places.



Perpendicular

A line or plane that is at right angles to another line or plane.



Parallel

Two lines that are always equidistant. Parallel lines never cross.

Perimeter

The total distance around the boundary of a shape.

Plane

A flat surface.

Prime number

A whole number greater than 1 that has exactly two factors, itself and 1.

Probability

The likelihood of an event happening.

Probability is expressed on a scale from 0 to 1.

Protractor

An instrument for measuring angles.

Quadratic

Describing a expression of the form $ax^2 + bx + c$ where a, b and c are real numbers.

Radius

In relation to a circle, the distance from the centre to any point on the circle.

Random sample

In statistics, a selection from a population where each sample of this size has an equal chance of being selected.

Range

A measure of spread in statistics. The difference between the greatest value and the least value in a set of numerical data.

Ratio

A part to part comparison.

Proportion

A part to whole comparison

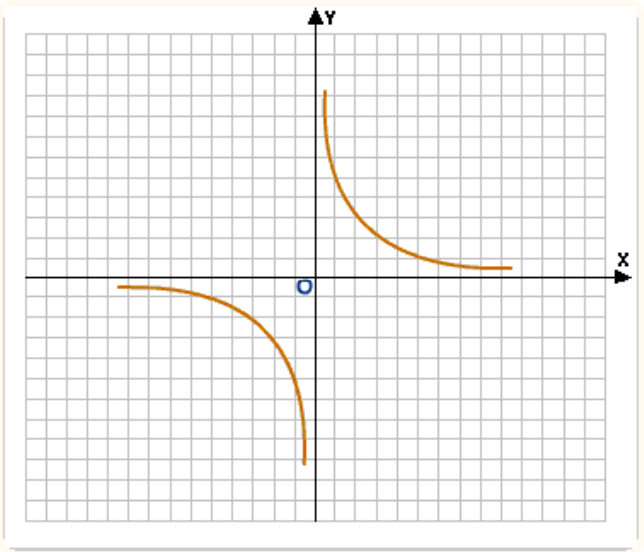
Rational number

A number that is an integer or that can be expressed as a fraction whose denominator is not zero. Rational numbers, when expressed as decimals, are recurring decimals or finite (terminating) decimals. Numbers that are not rational are irrational.

Reciprocal

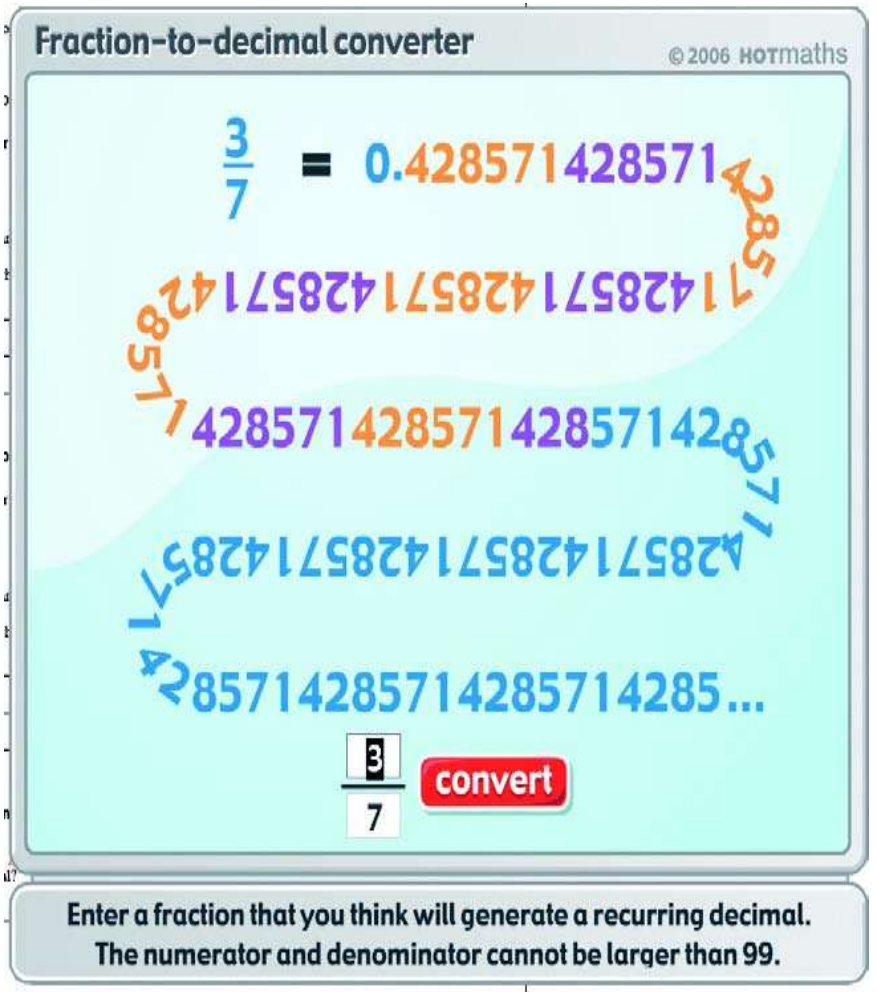
The multiplicative inverse of any non-zero number.

Example:1/3 is the reciprocal of 3.



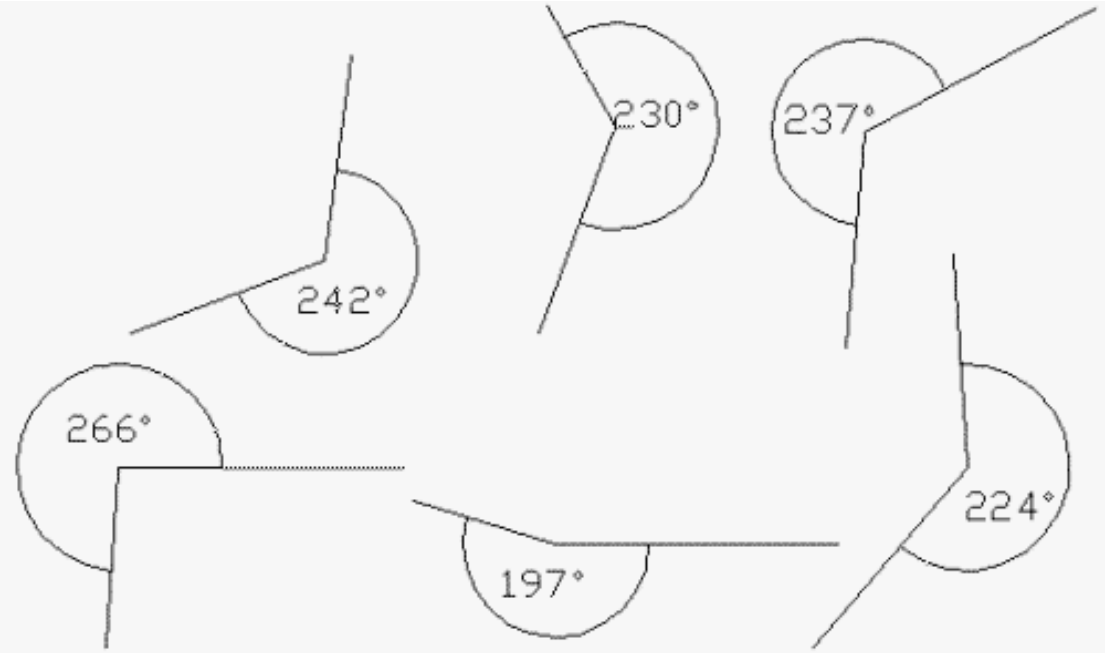
Recurring decimal

A decimal with an infinitely repeating digit or group of digits.

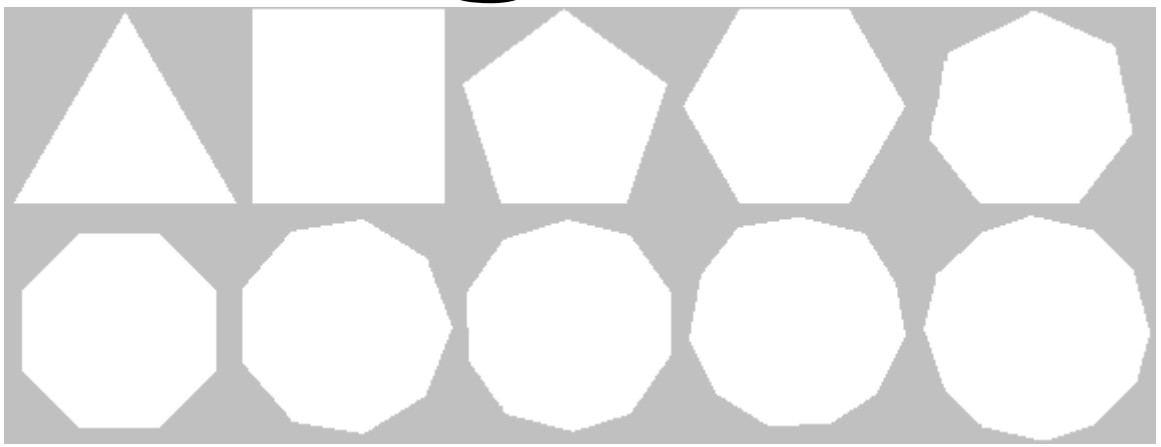


Reflex angle

An angle that is greater than 180° but less than 360°.



Regular



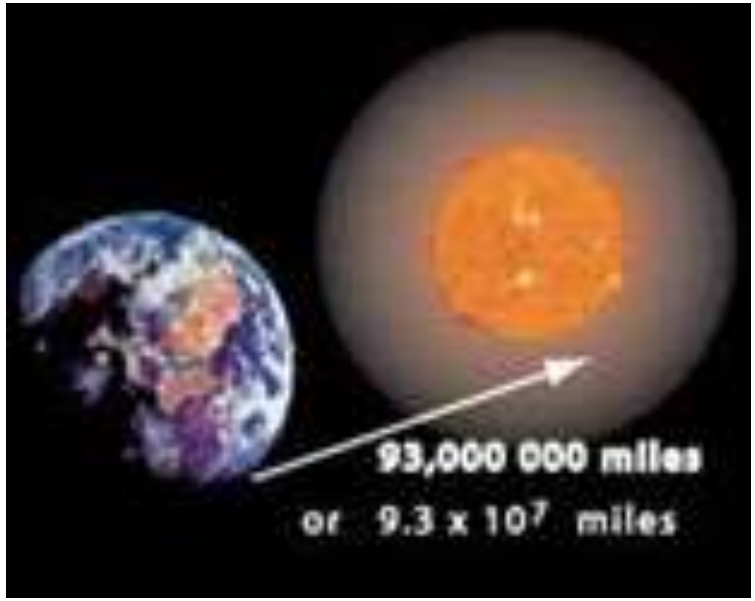
A polygon, having all sides equal and all internal angles equal.

Square number

A number that can be expressed as the product of two equal numbers.

Example 36 = 6 x 6 and so 36 is a square number.

Standard index form



A form in which numbers are recorded as a number between 1 & 10 multiplied by a power of ten. E.g.: 1930 in standard index form is 1.93×10^3.

Stratified sample

Where a population has been divided into strata/groups based on common characteristics. E.g.: for a school survey the pupils might be divided into age groups. A sample drawn at random from each age group should be proportional to the relative sizes of the different age group for greater precision.

Surd

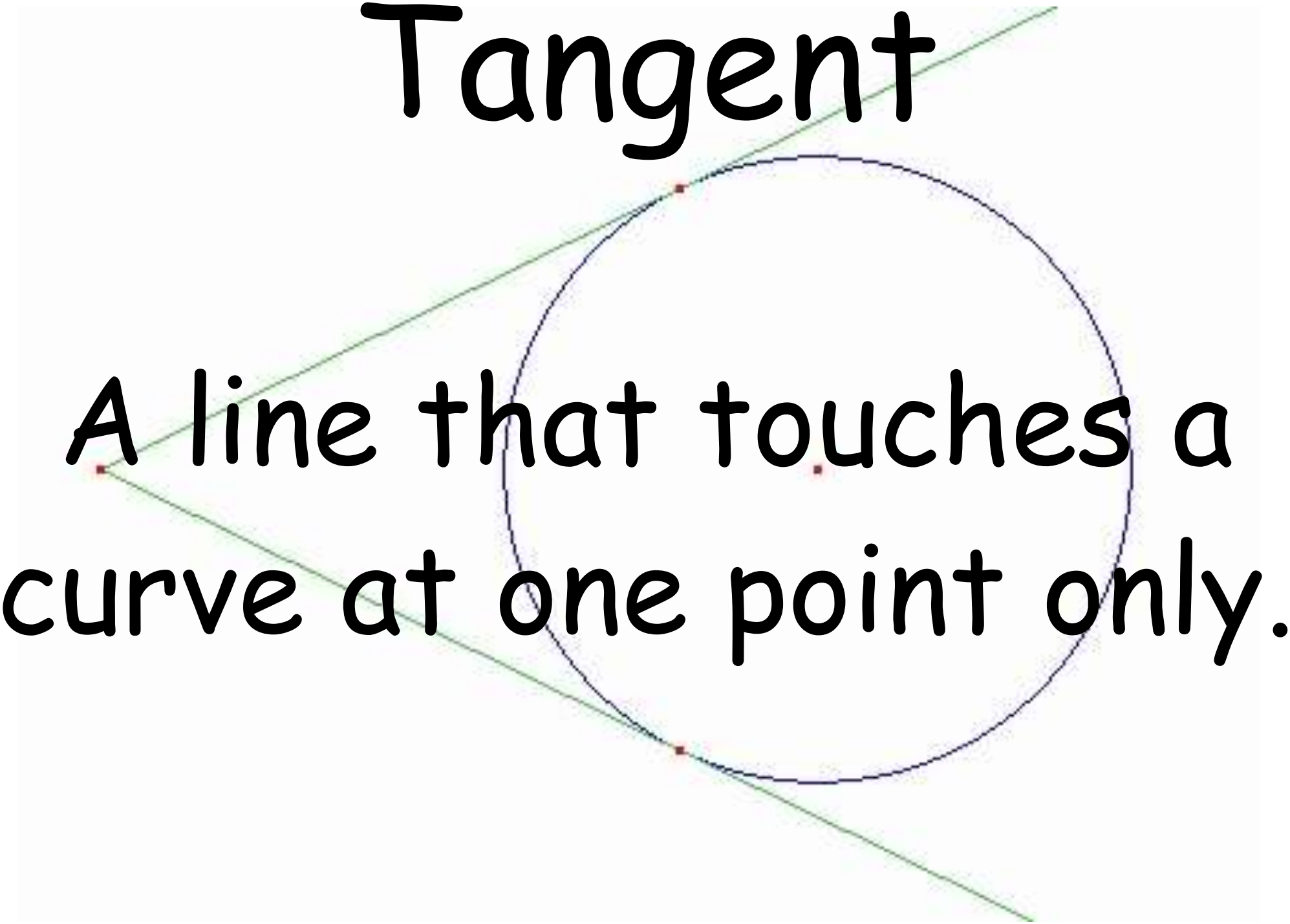
An irrational number expressed as the root of a natural number

E.g.: $3\sqrt{2}$

or a numerical expression involving irrational roots.

E.g. : $3 + 2\sqrt{7}$.

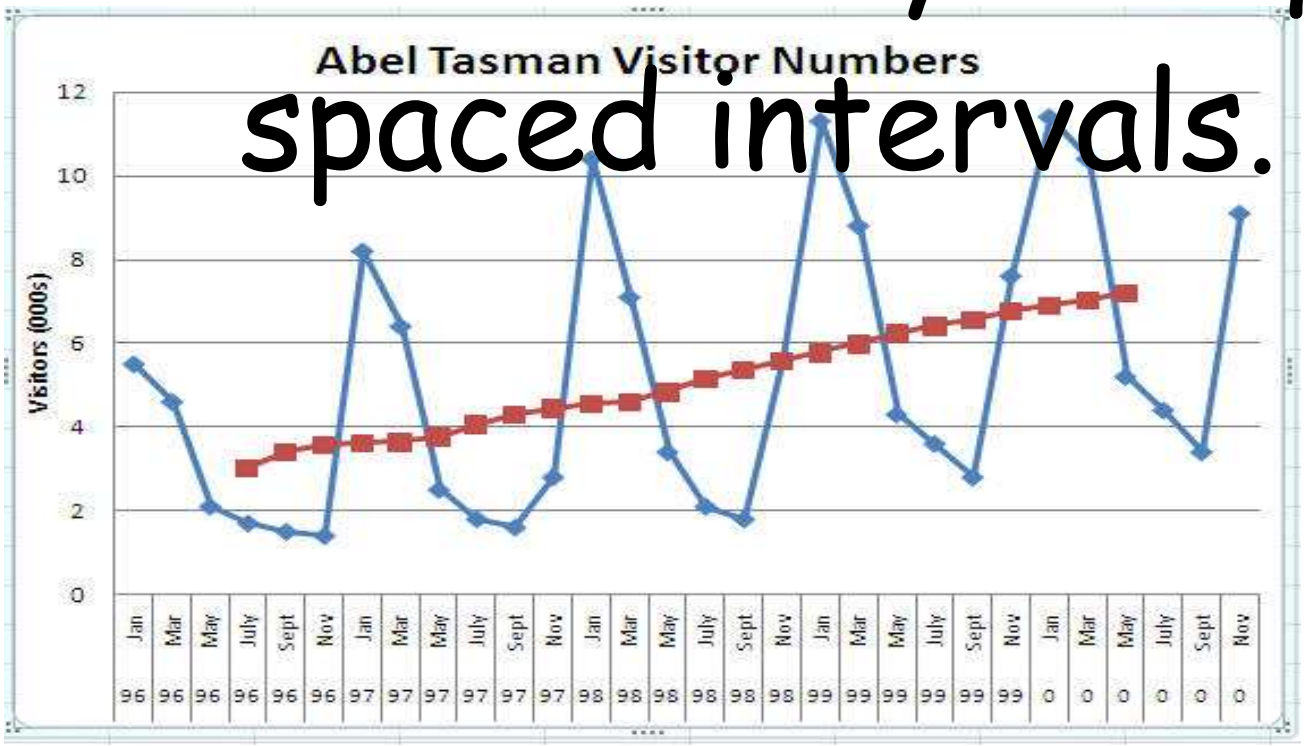
Tangent



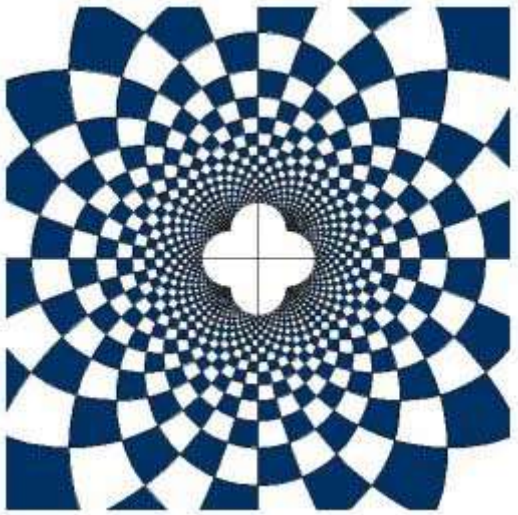
A line that touches a curve at one point only.

Time series

A set of observations, generally measurements or counts, taken over time usually at equally spaced intervals.

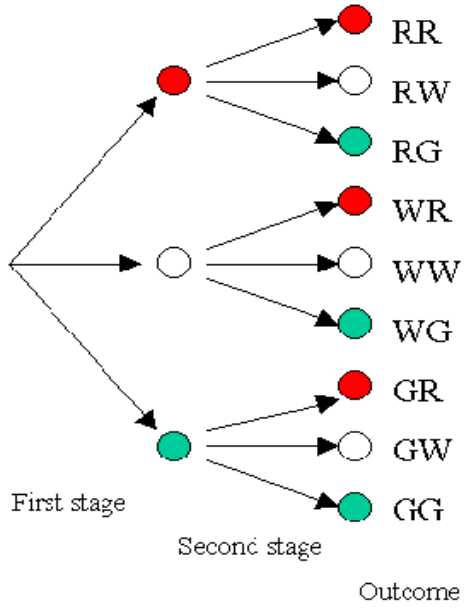


Translation



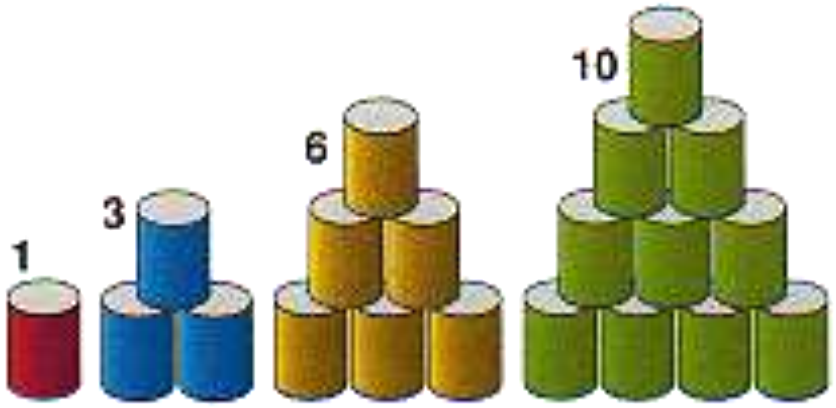
A transformation in which every point of a body/shape moves the same distance in the same direction.

Tree diagram



A branching, decision diagram in which probabilities may be assigned to each branch and used to determine the probability of any outcome of combined or compound events.

Triangular number



A number that can be represented by a triangular array of dots with the number of dots in each row from the base decreasing by one.

Trigonometric functions

Functions of angles. The main trigonometric functions are cosine, sine and tangent.

Uniform

Not changing.
Remaining constant.

Vector

A quantity that has magnitude and direction.

Vertex

The point at which two or more lines intersect. Plural: vertices. Also can be describes as corners.

Unit fraction

A fraction that has 1 as the numerator and whose denominator is a nonzero integer. Example: $\frac{1}{2}$