

T1 complex number	T1 real part	T1 imaginary part
T1 conjugate	T1 modulus	T1 argument
T1 Argand diagram	T1 interval bisection	T1 linear interpolation

T1 The real coefficient of i in a complex number written as $a + bi$.	T1 The real-number component a of a complex number written as $a + bi$.	T1 A number expressible as a real part plus an imaginary part, using i with i squared equal to minus one.
T1 An angle describing the direction of a nonzero complex number from the positive real axis in the complex plane.	T1 The non-negative distance of a complex number from the origin.	T1 For a complex number $a + bi$, the number $a - bi$, obtained by reversing the imaginary part.
T1 Estimating between two known points using the straight line joining them.	T1 A root method that repeatedly halves a sign-changing bracket for a continuous function, stopping at an exact midpoint root.	T1 A diagram plotting the real part horizontally and the imaginary part vertically.

T1 Newton–Raphson method	T1 parabola	T1 rectangular hyperbola
T1 focus	T1 directrix	T1 singular
T1 area scale factor	T1 Induction	T2 method of differences

T1 A hyperbola whose asymptotes meet at right angles.	T1 The curve formed by points equally distant from a fixed point and a fixed straight line.	T1 The root iteration $x_{\text{next}} = x - f(x)/f'(x)$, requiring a defined nonzero derivative at each step; convergence is not guaranteed.
T1 For a square matrix, having zero determinant and no inverse.	T1 A fixed line used with a focus to define a conic by a constant ratio of distances.	T1 A fixed point used with a directrix or another focus to define a conic by distances.
T2 Summing by expressing terms as differences so that intermediate terms cancel and boundary terms remain.	T1 A proof using a first true integer case and a conditional step from every allowed case to the next.	T1 The factor multiplying areas under a plane transformation; for a linear matrix map it is the absolute determinant.

T2 partial fractions	T2 Euler's relation	T2 de Moivre's theorem
T2 locus	T2 perpendicular bisector	T2 Möbius transformation
T2 integrating factor	T2 complementary function	T2 particular integral

T2 For an integer power, raising $\cos \theta + i \sin \theta$ to that power multiplies its argument by the integer.	T2 The identity $e^{i\theta} = \cos \theta + i \sin \theta$, linking a complex exponential with trigonometric functions.	T2 Simpler rational expressions whose sum equals a given rational expression.
T2 A complex map $w = (az + b)/(cz + d)$ with $ad - bc \neq 0$, interpreted with its pole and infinity on the extended complex plane.	T2 A line that crosses a line segment at its midpoint and at a right angle.	T2 The set of points satisfying a specified geometric condition.
T2 Any one solution of the full non-homogeneous linear differential equation; it contains no arbitrary constants.	T2 The general solution of the corresponding homogeneous linear differential equation.	T2 A factor used to multiply a differential equation so that an expression becomes a complete derivative and can be integrated.

T2 auxiliary equation	T2 Maclaurin series	T2 Taylor series
T2 polar coordinates	T2 initial line	T2 cardioid
T2 lemniscate	T3 hyperbolic functions	T3 catenary

T2 The derivative-based power series about a chosen point; it represents the function only where it converges to that function.	T2 A Taylor series centred at zero, whose coefficients are determined by the function's derivatives at zero.	T2 For a linear differential equation with constant coefficients, the polynomial equation obtained by substituting an exponential trial solution.
T2 A heart-shaped curve with one cusp, such as $r=a(1+\cos \theta)$ for a positive a.	T2 The reference ray from which a polar angle is measured, usually the positive x-axis.	T2 Coordinates specifying a point by its distance from an origin and its angle from a reference direction.
T3 The curve formed by a freely hanging, flexible chain with uniform weight per unit length under gravity.	T3 Functions built from exponentials, including $\sinh$, $\cosh$, $\tanh$ and their three reciprocal functions.	T2 A curve with two loops meeting in a figure-eight shape, such as $r^2=a^2\cos(2\theta)$.

T3 asymptote	T3 ellipse	T3 hyperbola
T3 eccentricity	T3 focus	T3 directrix
T3 reduction formula	T3 arc length	T3 surface of revolution

T3 A curve whose points have a constant absolute difference between their distances from two fixed points.	T3 A closed curve whose distances to two fixed foci have a constant sum.	T3 A line that a curve approaches arbitrarily closely as its input or output tends to a particular limit.
T3 A fixed line used with a focus to define a conic by a constant ratio of distances.	T3 A fixed point used with a directrix or another focus to define a conic by distances.	T3 The focus-to-directrix distance ratio for a conic; for a non-circular ellipse it lies between zero and one, and for a hyperbola it exceeds one.
T3 A surface swept out when a curve is rotated about an axis.	T3 The distance along a curved part of a circle or another curve.	T3 A recurrence relating an integral with one index or power to integrals with smaller indices or powers.

T3 vector product	T3 scalar triple product	T3 skew lines
T3 eigenvalue	T3 eigenvector	T3 diagonalise
T3 singular	T4 particle	T4 lamina

T3 Lines in three-dimensional space that are not parallel, do not meet and do not lie in one plane.	T3 The scalar $a \cdot (b \times c)$, giving the signed volume spanned by three vectors.	T3 The cross product of two three-dimensional vectors, perpendicular to both with magnitude equal to their magnitudes times the sine of the angle between them.
T3 Write a matrix as PDP^{-1} using a basis of eigenvectors, with their eigenvalues on the diagonal of D.	T3 A nonzero vector that a linear transformation maps to a scalar multiple of itself.	T3 A scalar λ for which a matrix maps some nonzero vector v to λv.
T4 A thin, flat sheet of material.	T4 An idealised object with mass whose size and shape are ignored in the motion model.	T3 For a square matrix, having zero determinant and no inverse.

T4 rod	T4 rigid body	T4 inextensible string
T4 smooth surface	T4 rough surface	T4 pulley
T4 bearing	T4 resultant	T4 impulse

T4 An ideal string whose length does not change when it is pulled taut.	T4 An idealised object whose shape and distances between its particles do not change.	T4 A long, thin rigid body modelled with length but negligible thickness.
T4 A wheel over which a rope or belt runs, used to change the direction of a force or transmit motion.	T4 A surface where friction may act along the contact.	T4 A surface modelled as providing no friction.
T4 The change in momentum, equal to force multiplied by its duration for a constant force.	T4 The single force with the same effect as all the forces acting together.	T4 A direction measured as an angle clockwise from north, usually written with three digits.

T4 coefficient of friction	T4 normal reaction	T4 tension
T4 equilibrium	T4 moment of a force	T5 projectile
T5 trajectory	T5 centre of mass	T5 wire framework

T4 A pulling force transmitted through a stretched string, cable or similar object.	T4 The contact-force component perpendicular to the supporting surface.	T4 The ratio of frictional force to normal contact force, at limiting friction for the static case.
T5 An object moving after being launched, typically modelled under gravity with air resistance neglected.	T4 The turning effect about a point, equal to the force times its perpendicular distance from that point.	T4 A state with no resultant force or resultant moment.
T5 An assembly of thin wire segments whose masses and positions determine its centre of mass.	T5 The point representing an object's or system's mass-weighted average position.	T5 the curve the position vector traces through space

T5 kinetic energy	T5 potential energy	T5 work done
T5 power	T5 work-energy principle	T5 conservation of mechanical energy
T5 coefficient of restitution	T5 limiting equilibrium	T5 normal reaction

T5 Energy transferred when a force acts through a displacement, calculated using the component of force along that displacement.	T5 Energy stored because of position or configuration.	T5 The energy an object has because of its motion.
T5 Constancy of kinetic plus potential energy when no external driving or dissipative work changes that total.	T5 The net work done on a particle equals its change in kinetic energy.	T5 The rate of energy transfer or work done.
T5 The contact-force component perpendicular to the supporting surface.	T5 The boundary of equilibrium just before motion begins; for impending sliding, static friction reaches its limit.	T5 The ratio of relative speed of separation to relative speed of approach along the line of impact in a collision.

T5 friction	T5 integration	T5 rigid body
T5 moment	T6 modulus of elasticity	T6 natural length
T6 Hooke's law	T6 elastic energy	T6 work-energy principle

T5 An idealised object whose shape and distances between its particles do not change.	T5 Finding an integral, such as an antiderivative or the accumulated value over an interval.	T5 A contact force opposing relative sliding or its tendency between surfaces.
T6 The unloaded length of a string or spring, before extension or compression.	T6 For an ideal elastic string, the force-valued constant λ in tension = $\lambda \times$ extension / natural length; it is not Young modulus.	T5 The turning effect of a force about a pivot.
T6 The net work done on a particle equals its change in kinetic energy.	T6 Energy stored by deformation; for a taut ideal Hookean string it is $\lambda x^2 / (2l)$, with extension x and natural length l.	T6 The rule that extension is proportional to applied force while a spring remains within its limit of proportionality.

T6 simple harmonic motion	T6 angular speed	T6 centripetal acceleration
T6 conical pendulum	T6 vertical circle	T6 centre of mass
T6 solid of revolution	T6 hemisphere	T6 composite body

T6 The acceleration towards the centre of a circular path, caused by the changing direction of velocity.	T6 The rate at which angular position changes, measured as angle per unit time.	T6 Oscillation in which acceleration is proportional to displacement from equilibrium and directed towards equilibrium.
T6 The point representing an object's or system's mass-weighted average position.	T6 A circular path in a vertical plane, with inward radial acceleration and generally changing speed.	T6 A pendulum whose bob moves in a horizontal circle while its string sweeps out a cone.
T6 A body assembled from simpler parts whose masses and centres can be combined.	T6 One half of a sphere.	T6 A solid swept out by rotating a plane region about an axis.

T6 equilibrium	T6 amplitude	T6 period
T7 histogram	T7 stem and leaf	T7 box plot
T7 median	T7 interquartile range	T7 outlier

T6 The time taken for one complete oscillation or cycle.	T6 The maximum displacement from an equilibrium position.	T6 A state with no resultant force or resultant moment.
T7 A display of a distribution using its median and quartiles, with whiskers drawn according to a stated rule.	T7 A data display splitting each numerical value into a stem and a final digit while retaining the individual values.	T7 A graph of grouped numerical data using adjoining bars whose areas represent frequencies.
T7 An observation unusually far from the rest of the data or from the pattern expected under a model.	T7 The upper quartile minus the lower quartile, measuring the spread of the middle half of ordered data.	T7 For ordered data, the middle value or mean of the middle pair; for a continuous distribution, a value with half the probability on each side.

T7 conditional probability	T7 independence	T7 regression line
T7 correlation coefficient	T7 discrete random variable	T7 probability function
T7 expectation	T7 variance	T7 Normal distribution

T7 A fitted straight line used to predict one variable from the other in a stated direction.	T7 Events for which the joint probability equals the product of the individual probabilities.	T7 The probability of an event given that another event has occurred.
T7 For a discrete random variable, the function assigning $P(X=x)$ to each possible value x.	T7 A random numerical value with a finite or countably infinite set of possible outcomes.	T7 A number between -1 and 1 measuring the strength and direction of linear association.
T7 A continuous symmetric bell-shaped probability model specified by its mean and standard deviation.	T7 A measure of spread based on the squared deviations of values from their mean.	T7 The probability-weighted average value of a random variable.

T7 standard deviation	T7 sample space	T7 positively skewed
T8 probability density function	T8 cumulative distribution function	T8 mode
T8 median	T8 binomial distribution	T8 Poisson distribution

T7	T7	T7
Having a distribution with a longer tail towards larger values.	The set of all possible outcomes of a random experiment.	A measure of spread equal to the square root of the variance.
T8	T8	T8
A most frequent data value, or a value where a continuous density attains its maximum.	A function $F(x)$ giving the probability that the random variable is less than or equal to x .	A function whose area over an interval gives the probability that a continuous random variable falls within that interval.
T8	T8	T8
A probability model for event counts in a fixed interval when events occur independently at a constant average rate.	A probability model for the number of successes in a fixed number of independent trials with the same success probability.	For ordered data, the middle value or mean of the middle pair; for a continuous distribution, a value with half the probability on each side.

T8 continuous uniform distribution	T8 census	T8 sample
T8 sampling frame	T8 statistic	T8 sampling distribution
T8 hypothesis test	T8 null hypothesis	T8 critical region

T8 To select part of a population for observation; the selected subset is also called a sample.	T8 Collecting data from every member of a population, not just a sample.	T8 A continuous distribution with constant density over a finite interval; equal-length subintervals have equal probabilities.
T8 The distribution of a statistic over all possible samples of the same size.	T8 A function of observed sample values that contains no unknown population parameter.	T8 The list or set of accessible units from which a sample is selected.
T8 The set of test-statistic values that would make you reject the null hypothesis.	T8 The default claim about a population parameter that a statistical test assesses against an alternative.	T8 A statistical procedure using sample evidence to assess a specified claim about a population or model.

T8 significance level	T8 continuity correction	T9 simple random sample
T9 systematic sampling	T9 stratified sampling	T9 quota sampling
T9 unbiased	T9 bias	T9 standard error

T9 A sample selected so that every subset of the chosen size has the same chance of selection.	T8 Adding or subtracting 0.5 when a continuous distribution approximates a discrete one.	T8 The chosen maximum probability of rejecting a true null hypothesis; a discrete test may have a smaller actual level.
T9 Filling specified category counts using non-random selection of individuals.	T9 Dividing a population into strata and randomly sampling within each, often in proportion to stratum size.	T9 Selecting units at a fixed interval after a random start, while checking for periodic patterns in the list.
T9 The standard deviation of a statistic's sampling distribution, often estimated from a sample.	T9 An estimator's expected value minus the true parameter value.	T9 Describing an estimator whose expectation equals the population parameter it estimates.

T9 confidence interval	T9 Central Limit Theorem	T9 goodness of fit
T9 contingency table	T9 expected frequency	T9 degrees of freedom
T9 Spearman's rank correlation coefficient	T9 critical value	T9 hypothesis test

T9 A test comparing observed counts with counts predicted by a specified probability model.	T9 A theorem stating that, under suitable conditions, the sampling distribution of a mean approaches a normal distribution as sample size increases.	T9 An interval calculated from sample data using a method with a stated long-run probability of containing the population parameter.
T9 The number of independent values free to vary after relevant constraints have been imposed.	T9 The count predicted for a category under the null model, usually sample size times its model probability.	T9 A table showing frequencies for combinations of categories of two variables.
T9 A statistical procedure using sample evidence to assess a specified claim about a population or model.	T9 A boundary value of a reference distribution used to decide whether to reject a null hypothesis.	T9 A measure of monotonic association obtained by correlating the ranks of paired observations.

T9 statistic	T10 Dijkstra's algorithm	T10 Gantt chart
T10 Kruskal's algorithm	T10 Prim's algorithm	T10 activity-on-arc network
T10 bin packing	T10 bubble sort	T10 classical travelling salesman problem

T10 A bar chart showing scheduled activities and their timing along a time axis.	T10 A shortest-path algorithm that makes the smallest temporary distance permanent, then updates neighbours; edge weights must be non-negative.	T9 A function of observed sample values that contains no unknown population parameter.
T10 A directed project network whose arcs represent activities and whose event vertices encode their dependencies.	T10 Building a minimum spanning tree by repeatedly adding the cheapest edge from the current tree to a new vertex.	T10 Building a minimum spanning tree by taking edges in increasing weight order while rejecting every edge that would create a cycle.
T10 Finding a shortest closed tour visiting each vertex exactly once before returning to the start.	T10 A sorting algorithm that repeatedly compares adjacent items and swaps those in the wrong order until the sequence is ordered.	T10 Assigning items to capacity-limited bins while trying to use as few bins as possible.

T10 critical path	T10 dummy	T10 earliest event times
T10 latest event times	T10 minimum spanning tree	T10 nearest neighbour algorithm
T10 quick sort	T10 ruler method	T10 total float

T10 The earliest times events can occur after all predecessor activities finish, found by a forward pass.	T10 A zero-duration activity arc used to represent a dependency in an activity-on-arc network.	T10 A longest-duration path through a project network, determining the earliest possible completion time.
T10 A tour heuristic that repeatedly visits a nearest unvisited vertex, then returns to its start; it need not find the shortest tour.	T10 A connected cycle-free network joining every vertex with the smallest possible total edge weight.	T10 The latest event times consistent with completing the project on time, found by a backward pass.
T10 The delay available to an activity without delaying project completion: latest finish minus earliest start minus duration.	T10 Moving a line of constant linear-objective value to find its best contact with the feasible region.	T10 Sorting by partitioning around a pivot, keeping equal items, then recursively sorting the smaller and larger groups.

T10 vertex method	T10 route inspection (Chinese postman) problem	

	T10 Finding a shortest closed route traversing every edge of a connected network at least once.	T10 Comparing a linear objective at feasible corner points to find an existing bounded optimum.