

	Category	単語	Words	Definitions/descriptions
1	General	電磁気学	electricity and magnetism	
2	General	量子力学	quantum mechanics	
3	General	統計力学	statistical mechanics	
4	General	卒業論文	senior thesis	
5	General	大学院生	graduate student	
6	General	学部生	undergraduate student	
7	General	理学研究科	Graduate School of Science	
8	General	理学部	Faculty of Science	
9	General	前期/後期	first semester/ second semester	
10	General	経験則	empirical rule	A rule derived from experiments or observations rather than theory.
11	Matter	分子	molecule	The smallest unit into which any substance is divided into without losing its chemical nature, usually consisting of a group of atoms.
12	Matter	原子	atom	The smallest part of an element that can exist, consisting of a small dense nucleus of protons and neutrons surrounded by orbiting electrons.
13	Matter	原子核	nucleus (pl. nuclei)	The most massive part of an atom, consisting of protons and neutrons.
14	Matter	核子	nucleon	A collective term for a proton or neutron, i.e. for a constituent of an atomic nucleus.
15	Matter	陽子	proton	A positively charged nucleon.
16	Matter	中性子	neutron	An elementary particle with zero charge and with rest mass nearly equal to that of a proton. A charge-neutral nucleon.
17	Matter	電子	electron	A stable elementary particle whose negative charge $-e$ defines an elementary unit of charge.
18	Matter	光子	photon	A quantized particle of electromagnetic radiation (light).
19	Matter	水素	hydrogen	An element whose atom consists of one proton and one electron.
20	Matter	元素の周期表	periodic table of the elements	A table of chemical elements arranged in order of their atomic numbers.
21	Math	足し算	addition	The mathematical operation represented by a plus symbol (+).
22	Math	引き算	subtraction	The mathematical operation represented by a minus symbol (-).
23	Math	整数	integer	A whole number, i.e. does not contain a fraction.
24	Math	偶数	even number	A number that can be written as $2n$ , where $n$ is an integer.
25	Math	奇数	odd number	A number that can be written as $2n+1$ , where $n$ is an integer.
26	Math	分数	fraction	A number expressed as $p$ over $q$ ( $p/q$ ).
27	Math	小数	decimal	A fraction whose denominator is a power of ten and whose numerator is expressed by figures placed to the right of a decimal point.
28	Math	分子	numerator	The number above the line in a fraction.
29	Math	分母	denominator	The number below the line in a fraction.
30	Math	積分	integration	The process of finding an integral, i.e. the function for which the derivative is the given function. The integral can express the area under the graph of the given function.
31	Math	近似	approximation	Something that is similar but not exactly equal to something else. E.g. an approximate value for some quantity can be used if the true value is too difficult to calculate, or an approximate model can be used if the true model is too complicated.
32	Mechanics	精度	precision	A measure of the smallness of random deviation from the mean value.
33	Mechanics	確度	accuracy	A measure of the smallness of systematic deviation from the true value.
34	Math	行列	matrix (pl. matrices)	An $m \times n$ matrix is a rectangular array of numbers (do not have to be numbers) set out in $m$ rows and $n$ columns.
35	Math	円筒	cylinder	A geometric shape with parallel sides and circular cross-section.
36	Math	球	sphere	A solid object that is completely round, with every point on its surface at an equal distance from the center.

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37	Math	立方体	cube	A three-dimensional object bounded by six equal squares, with neighbouring squares perpendicular to each other.
38	Math	四角形	rectangle	A four-sided shape with four straight lines joined at right angles. Unlike a square, the sides do not all have to be of equal length.
39	Math	平行四辺形	parallelogram	A two-dimensional shape with opposite sides parallel and equal in length. The three-dimensional counterpart of a parallelogram is a parallelepiped.
40	Math	台形	trapezoid	A two-dimensional shape with 4 straight sides that has a pair of opposite sides parallel.
41	Math	正三角形	equilateral triangle	A triangle in which all three sides are equal.
42	Math	二等辺三角形	isosceles triangle	A triangle that has two sides of equal length.
43	Math	半径	radius ( <i>pl.</i> radii)	The distance from the center of a circle (or sphere) to its circumference.
44	Math	直径	diameter	A straight line going from one side of a circle to the other side, passing through the center of the circle.
45	Math	表面積	surface area	The total area of the faces or curved surfaces of a solid object.
46	Math	体積	volume	The amount of three-dimensional space occupied by a body or enclosed by a closed boundary.
47	Math	直角	a right angle	An angle of $90^\circ$
48	Math	平行	parallel	The relationship between two lines (or planes) that never meet.
49	Math	垂直	perpendicular	The relationship between lines or surfaces that intersect at right angles.
50	Math	直交	orthogonal	Orthogonality is an extension of the idea of perpendicularity to higher dimensions and non-geometric objects.
51	Math	原点	origin	A fixed point from which coordinates are measured.
52	Math	対数関数	logarithm	The power to which a fixed number (the base) must be raised in order to recover a given number.
53	Math	指数関数	exponential	The function $e^x$ , which is equal to its own derivative. ( $e = 2.7182818 \dots$ )
54	Math	平均	mean	For the set of numbers $a_1, a_2, a_3, \dots, a_n$ , the value given by $(a_1 + a_2 + a_3 + \dots + a_n)/n$ . Also commonly known as the average.
55	Math	桁数	an order of magnitude	A power of 10. The value of physical quantities are often given to an order of magnitude. For example, $2.3 \times 10^5$ and $6.9 \times 10^5$ are of the same order of magnitude.
56	Math	次元	dimension	(1) Combinations for any physical quantities that can be expressed in terms of base units (such as meter, kg and second) of fundamental physical quantities (such as length, mass and time). (2) In geometry, the dimension of the space is the minimum number of coordinates required to specify any point within the space.
57	Math	複素数	complex number	A number that can be expressed as $a + ib$ , where $i$ is the imaginary unit satisfying $i^2 = -1$ and $a$ and $b$ are real numbers.
58	Math	実数	real number	A number with no imaginary part. This can be expressed as $a + 0i$
59	Math	虚数	imaginary number	A number with no real part. This can be expressed as $0 + ib$
60	Math	円筒座標	cylindrical coordinate system	A three dimensional coordinate system in which a position is specified by radial distance $\rho$ , azimuthal angle $\varphi$ , and axial distance $z$ .
61	Math	球座標	spherical coordinate system	A three dimensional coordinate system in which a position is specified by distance $r$ from the origin, polar angle $\theta$ , and azimuthal angle $\varphi$ .
62	Math	極角	polar angle, $\theta$	In two dimensions, the polar angle is measured counterclockwise from the $x$ -axis to a line drawn from the origin to some given point in the $x$ - $y$ plane. In three dimensions, the polar angle is measured from the $z$ -axis to a line drawn from the origin to some given point in the 3-dimensional space.
63	Math	方位角	azimuthal angle, $\varphi$	In three dimensions, after projection of the vector between the origin and some given point of interest onto the $x$ - $y$ plane, the azimuthal angle is the angle measured counterclockwise from the $x$ -axis to this projected line.