

GRE 常用数学术语汇编

abscissa	横坐标	absolute value	绝对值, 例如 $ a = -a $, 其中 a 为任意实数
acute angle	锐角	acute triangle	锐角三角形
add (addition)	加(加法)	adjacent angle	邻角
adjacent vertices	相邻顶点	algebra	代数
algebraic expression	代数式	algebraic fraction	分式, 如 $\frac{2m}{m+n}$
algebraic term	代数项	aliquant	除不尽的
aliquot	除得尽的	alternant	替代物, 交替函数, 交替行列式
alternate angle	内错角	altitude	高
amount to	合计	angle	角
angle bisector	角平分线	apiece	每个, 每件, 每人
approximate	近似	arc	弧
arithmetic mean	算术平均值	arithmetic progression (sequence)	等差数列
arm	直角三角形的股	average value	平均值(arithmetic mean)
bar graph	柱状图	base	底边, 乘幂的底数, 例如 6^4 中的 6
be equivalent to another equation	与另一方程同等	billion	10 亿
binomial	二项式	bisect	平分
blot out	涂掉	brace	一双, 如: a brace of cats 两只猫
calculate to three decimal places	计算结果保留三位小数	cancellation	相消, 相约
car pool	汽车的合伙使用	cardinal	基数
cent	美分	center of a circle	圆心
centigrade	摄氏	central angle	圆心角
chord	弦	circle	圆
circle graph	饼图, 扇面图, 圆形图	circular cylinder	圆柱体
circumference	周长	circumscribe	外接, 外切
clear an equation of fractions	将分式方程整式化	clockwise	顺时针方向
coefficient	系数	combination	组合: $C_n^m = \frac{n!}{m!(n-m)!}$
common base triangles	同底三角形	common denominator	公分母
common divisor	公约数	common factor	公因子
common fraction	普通分数, 简分数	common logarithm	常用对数
common multiple	公倍数	common ratio	公比
common year	平年, 指 365 天的一年	complementary angle	余角
complementary function	余函数	complete quadratic equation	完全二次方程, 如 $x^2 + 4x + 4 = 0$

complex fraction	繁分数	complex number	复数, 如 $T+i$
composite number	合数, 除 1 及本身外还有其他因子的数	compound annual interest	年复利
compounded interest	复利	concave polygon	凹多边形
concentric circles	同心圆	cone	圆锥(体积 $= \frac{1}{3}\pi r^2 \cdot h$)
congruent	全等的	consecutive even integer	连续偶数
consecutive number	连续整数	consecutive odd integer	连续奇数
constant	常数	convex polygon	凸多边形
coordinate	坐标	coordinate system	坐标系
corresponding angle	同位角	cross multiply	交叉相乘
cross section	横截面	cube	立方体, 立方数
cube root	立方根	cubic metre	立方米
cumulative graph	累积图	decagon	十边形
decimal	小数	decimal arithmetic	十进制运算
decimal fraction	纯小数	decimal point	小数点
decimal system, decimal scale	十进制	decrease	减少
decrease by	减少了	decrease to	减少到
define	定义, 化简	denominator	分母
denote	代表, 表示	depreciation	折旧
depth	深度	diagonal	对角线
diameter	直径	difference	差
differential	微分	digit	数字
dime	一角, 一角硬币	dimension	大小, 度量(指长、宽、高等)
direct proportion	正比	discount	折扣
distinct	不同的	divide	除
divided evenly	被整除	dividend	被除数, 红利
divisible	可被整除的, 如 10 is divisible by 5	division	除法
division sign	除号 \div , 斜线分数号 (/)	divisor	因子, 除数
down payment	直接付款, 首付	dozen	一打, 十二个
edge	棱	endpoint	端点
equal	相等	equation	方程
equation of the first degree	一次方程	equilateral	等边形, 相等的边
equilateral triangle	等边三角形	equivalence relation	等价关系
equivalent equation	同解方程式, 等价方程式	equivalent fractions	等值分数
estimation	近似	even integer, even number	偶数
evenly even integer	能再平分的数	evenly spaced	等间隔的
exponent	指数, 幂	extent	维数(A plane figure is 2-extent)
exterior angle	外角	exterior angles on the same side of the transversal	同旁外角
factor	因子	factorable quadratic equation	可因式分解的二次方程

factorial	阶乘
face of a solid	立体的面
Fahrenheit	华氏
foot	英尺
gallon	加仑(1 gallon=4 quart)
geometric progression (sequence)	等比数列
graph	图
gross	十二打, 笊; 总额
hexagon	六边形
hypotenuse	斜边
inch	英寸
included side	夹边
increase	增加
increase to	增加到
inference	推理, 推论
infinitesimal	无穷小
inscribe	内切
integer	整数
intercept	截距
interior angle	内角
inverse	倒数
inverse proportion	反比
irrational number	无理数
least common denominator	最小公分母
least possible value	最小可能值
length	长
like terms	同类项
line graph	线图
linear	一次的, 线性的
linear equation	线性方程, 一次方程
linear transformation	线性变损, 一次变换
literal coefficient	字母系数
margin	利润, 赚头
maximum	极大值
median	中数
meter	米
midpoint	中点
minuend	被减数
minute	分(角的度量单位, 60 分=1 degree)

factorization	因式分解
finish line	终点线
fraction	分数
geometric mean	几何平均数, 如 $\sqrt[4]{abcd}$
geometry	几何
graph theory	图论
heptagon	七边形
hyperbola	双曲线
improper fraction	假分数
included angle	夹角
incomplete quadratic equation	不完全二次方程, 如: $2x^2+5$
increase by	增加了
inequality	不等式
infinite decimal	无穷小数
infinity	无穷大
inscribed triangle	内接三角形
intercalary year (leap year)	闰年(366 天)
interest	利息
intersect	相交
inverse function	反函数
irrational	无理数
isosceles triangle	等腰三角形
least common multiple	最小公倍数
leg	三角形的直角边, 梯形的两条不平行的边
less than	小于
line	直线
line segment	线段
linear algebra	线性代数
linear function	线性函数, 一次函数
list price	标价
logarithm	对数
markup (markdown)	涨价(降价)
mean	平均数
median of a triangle	三角形的中线
micron	微米
minimum	最小值
minus (take away)	减, 负, 负数
mixed decimal	混合小数

mixed number	带分数
monomial	单项式
multinomial	多项式
multiplicand	被乘数
multiplier	乘数
natural logarithm	自然对数
negative number	负数
nickel	五美分硬币
nonnegative	非负的
null set (empty set)	空集
number theory	数论
numerical coefficient	数字系数
oblateness (ellipse)	椭圆形
obtuse angle	钝角
odd integer, odd number	奇数
ordinal	序数
ordinate	纵坐标
original equation	原方程
parallel lines	平行线
parentheses	括号
pentagon	五边形
percentage	百分比
permutation	排列 ($P_n^m = \frac{n!}{(n-m)!}$)
pie chart	饼图
plane	平面
polygon	多边形
positive number	正数
prime factor	质因子
product	积
progression	数列
proper subset	真子集
pyramid	角锥体
quadrant	象限
quadrihedron	三角锥
quantic	齐次多项式, 多元齐次多项式
quarter	四分之一
quartic equation	四次方程
radian	弧度
radius	半径
ratio	比率
real number	实数
rectangle	长方形
rectangular hyperbola	等轴双曲线
recurring decimal	循环小数
regular prism	正棱柱

mode	众数
multilateral	多边的
multiple	倍数
multiplication	乘法
multiply (times)	乘
natural number	自然数
negative whole number	负整数
nonagon	九边形
normal matrix	正规矩阵
number line	数轴
numerator	分子
oblique	斜三角形
octagon	八角形
opposite	(直角三角形中的)对边
ordinary scale	十进制
origin	原点
overlap	重叠
parallelogram	平行四边形
penny	一美分硬币
per capita	人均
perimeter	周长
perpendicular	垂直的, 垂直
pint	品脱
plane geometry	平面几何
polynomial	多项式
power	幂, 乘方
prime number	质数
profit	利润
proper fraction	真分数
proportion	比例
Pythagorean theorem	毕达哥拉斯定理, 勾股定理
quadratic equation	二次方程
quadrilateral	四边形
quart	夸脱 ($1 \text{ quart} = \frac{1}{4} \text{ gallon} = 2 \text{ pint}$)
quotient	商
radical sign	根号
range	值域
rational number	有理数
reciprocal	倒数, 倒数的
rectangular coordinate	直角坐标系
rectangular solid	长方体
regular polygon	正多边形
regular pyramid	正棱锥

regular solid (regular polyhedron)	正多面体	remainder	余数
remote interior angle	不相邻内角	retail price	零售价
rhombus	菱形	right angle	直角
right circular cone	直圆锥	right circular cylinder	直圆柱体
right triangle	直角三角形	root	根
root sign	根号	round angle	周角
round off	四舍五入	round to/ round off	四舍五入
scalene	斜的, 不等边的	scalene cylinder	斜柱体
scalene triangle	不等边三角形	score	二十(指 20)
segment of a circle	弧形	semicircle	半圆
sequence	序列, 数列	set	集合
side	边长	sign	符号
similar terms	同类项	simple (common) fraction	简分数
simple interest	单利	simultaneous equations	联立方程组
slope	斜率	solid	立体
solid geometry	立体几何	solution	解, 答案
solution set	解集	sphere	球体(表面积 $4\pi r^2$, 体积 $\frac{4}{3}\pi r^3$)
square	正方形, 平方	square measure	平方制单位
square root	平方根	straight angle	平角, 即 180° 角
straight line	直线	subtract	减
subtrahend	减数	sum	和
supplementary angles	补角	surface area	表面积
table	表格	tangent	切线
tens	十位	tenths	十分位
the extremes of a proportion	比例外项	the means of a proportion	比例内项
tie	并列, 打平	to the nearest	四舍五入, 精确到
transversal	截线	trapezoid	梯形
triangle	三角形	triangle inequality	三角不等式
trigonometric function	三角函数	trigonometry	三角学
trinomial	三项式	union	并集
unit	单位	units	个位
variable	变量	vertex (vertices)	顶点
vertical angle	对顶角	volume	体积
vulgar fraction	普通分数(与 decimal fraction 相对)	weighted average	加权平均值
whole number	整数	width	宽
yard	码	zero	零

GRE 常用数学符号及其英文表达

+	plus, positive
-	minus, negative
×	multiplied by, times
÷ (/)	divided by
=	is equal to, equals
≠	not equal to
≈	is approximately equal to, approximately equals
>	greater than
<	less than
≥	equal to or greater than
≤	equal to or less than
≫	much greater than
≪	much less than
∈	is a member of the set
⊂	is a subset of
()	round brackets, parentheses
[]	square brackets
{ }	braces
∞	similar to
≡	congruent to
⊥	perpendicular to, at right angles with
//	parallel to
∠	angle
⊙	circle
\overline{AB}	length of line from A to B
e	the base of natural logarithms, approx. 2.71828
π	pi; the ratio of the circumference of a circle to its diameter, approx. 3.14159
$n!$	factorial n , $n(n-1)(n-2)(n-3)\cdots 1$
$ x $	the absolute value of x
x^2	x square; x squared; the square of x ; the second power of x ; x to the second power; x raised to the second power
x^3	x cube; x cubed; the cube of x ; x to the third power; the third power of x ; x raised to the third power
x^{-10}	x to the minus tenth (tenth power)

\sqrt{x}	the square root of x , root x
$\sqrt[3]{x}$	the cube root of x
x^n	the n th power of x , x to the power n , x raised to the n th power, x to the n th power
$\frac{1}{x^n}$	one over x to the n
$\frac{\alpha^5}{\beta^2}$	α to the five over β squared
$x^{\frac{1}{n}} (\sqrt[n]{x})$	the n th root of x , x to the power one over n
$y=f(x)$	y is a function of x
$a+b$	a plus b ; the sum of a and b ; the total of a and b ; a added to b ; a increased by b ; a more than b ; a greater than b
$a-b$	a minus b ; a less b ; the difference of a and b ; from a subtract b ; a takes away b ; a decreased by b ; a diminished by b ; b is subtracted from a ; b less than a
$a \times b$	(a) (b); $a \cdot b$; a multiplied by b ; the product of a and b ; a times b
$a \div b$	a divided by b ; the quotient of a and b
$a:b$	the ratio of a to b
$a:b::c:d$	$a:b=c:d$; a is to b as c is to d ; the ratio of a to b equals the ratio of c to d
$xX+yY=1$	little x times big X plus little y times big Y equals one
$\frac{x}{X}+\frac{y}{Y}=\frac{z}{Z}$	little x over big X plus little y over big Y equals little z over big Z
%	per cent
‰	per mille
$\frac{1}{2}$	a half; one half
$\frac{3}{4}$	three fourths; three quarters
$3\frac{1}{2}$	plus three and a half
0.035	decimal (point) naught three five
5.32	five point three two
4.03 $\dot{2}\dot{5}$	four point naught three two five, two five recurring
100°C	100 hundred degrees Centigrade
50°F	fifty degrees Fahrenheit
$a \in A$	a is a member of set A
$a \notin A$	a is not a member in set A
$A \subset B, A \subseteq B$	set A is contained in set B
$A \not\subset B$	set A is not contained in set B
$A \cap B, A \cdot B$	intersection of sets A and B
$A \cup B, A+B$	union of sets A and B

Measurements

Length: 1 mile (mi) = 1,760 yards = 5280 feet

1 yard (yd) = 3 feet

1 foot (ft) = 12 inches (in)

Area: 1 square yard (sq yd) = 9 square feet (sq ft)

1 square foot (sq ft) = 144 square inches (sq in)

Time: 1 decade = 10 years

1 year = 52 weeks

1 year = 365 days

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

Volume: 1 quart (qt) (夸脱) = 2 pints (pt) (品脱)

1 gallon (gal 加仑) = 4 quarts (qt)

1 bushel (bu) (蒲式耳) = 4 pecks (pk) (配克)

1 pint = 2 cups

Weight: 1 ton (T) = 2,000 pounds

1 pound (lb) = 16 ounces (oz)

1 ounce = 16 drams (打兰)

GRE 常用数学公式

1. Permutation: $P_n^m = \frac{n!}{(n-m)!} = n(n-1)(n-2)\cdots(n-m+1)$
2. Combination: $C_n^m = \frac{n!}{m!(n-m)!} = \frac{n(n-1)(n-2)\cdots(n-m+1)}{1 \times 2 \times 3 \cdots m}$
3. Discount = Cost \times rate of Discount
4. The number of factors of $Z = x^a \cdot y^b \cdot z^c$ (x, y, z is prime number), $n = (a+1)(b+1)(c+1)$
5. Quadratic formula $x = \frac{1}{2a}(-b \pm \sqrt{b^2 - 4ac})$
6. Arithmetic progression $a_n = a_1 + (n-1)d$, $S_n = \frac{n(a_1 + a_n)}{2} = na_1 + \frac{n(n-1)}{2}d$
7. Geometric progression $a_n = a_1 q^{(n-1)}$, $S_n = \frac{a_1(1-q^n)}{1-q}$
8. Distance between points (x, y) and (a, b) is $\sqrt{(x-a)^2 + (y-b)^2}$
9. Area of triangle = $\frac{1}{2}bh$
10. Special formula of area of triangle = $\sqrt{s(s-a)(s-b)(s-c)}$, $s = \frac{1}{2}(a+b+c)$
11. Area of rectangular = lw
12. Area of parallelogram = bh
13. Area of a rhombus = $\frac{\text{Product of two diagonals}}{2}$
14. Area of a trapezoid = $\frac{(b_1 + b_2)}{2}h$
15. Volume of cubic solid = a^3
16. Volume of rectangular solid = $l \times w \times h$
17. Volume of right circular cylinder = $\pi r^2 \cdot h$
18. Volume of right circular cone = $\frac{1}{3}\pi r^2 \cdot h$
19. Volume of ball = $\frac{4}{3}\pi r^3$