

AP Precalculus

Glossary · · every term in the course, A–Z

English	Pinyin
 amplitude <i>/ˈæmplɪtjuːd/</i>	zhèn fú
arc <i>/ɑːk/</i>	hú
 arcsine <i>/ˈɑːksaɪn/</i>	fǎn zhèng xián
area <i>/ˈeəriə/</i>	miàn jī
 arithmetic sequence <i>/əˈrɪθmətɪk ˈsiːkwəns/</i>	děng chā shù liè
 assumptions <i>/əˈsʌmpʃnz/</i>	jiǎ shè
 asymptote <i>/ˈæsɪmptəʊt/</i>	jiàn jìn xiàn
 average rate of change <i>/ˈævɹɪdʒ reɪt ɒv tʃeɪndʒ/</i>	píng jūn biàn huà lǜ
away from	yuǎn lí
axes <i>/ˈæksɪz/</i>	zhóu
 base <i>/beɪs/</i>	dǐ shù
centre <i>/ˈsentə/</i>	yuán xīn
change in tandem	xié tóng biàn huà
 change-of-base <i>/tʃeɪndʒ ɒv beɪs/</i>	huàn dǐ
circle <i>/ˈsɜːkl/</i>	yuán
cofunction	yú hán shù
columns	liè
 common difference <i>/ˈkɒmən ˈdɪfrəns/</i>	gōng chāi
 common log <i>/ˈkɒmən lɒɡ/</i>	cháng yòng duì shù

English	Pinyin
 common logarithm <i>/ˈkɒmən ˈlɒɡərɪθəm/</i>	cháng yòng duì shù
 common ratio <i>/ˈkɒmən ˈreɪʃiəʊ/</i>	gōng bǐ
complete the square <i>/kəmˈpliːt ðə skweə/</i>	pèi fāng fǎ
completing the square <i>/kəmˈpliːtɪŋ ðə skweə/</i>	pèi fāng fǎ
 complex <i>/ˈkɒmpleks/</i>	fù shù
 complex number <i>/ˈkɒmpleks ˈnʌmbə/</i>	fù shù
 component form <i>/kəmˈpəʊnənt fɔːm/</i>	fèn liàng xíng shì
compose	fù hé
 composite function <i>/ˈkɒmpəzɪt ˈfʌŋkʃn/</i>	fù hé hán shù
 composition <i>/ˌkɒmpəˈzɪʃn/</i>	fù hé
 concave down <i>/kɒnˈkeɪv daʊn/</i>	tū
 concave up <i>/kɒnˈkeɪv ʌp/</i>	āo
 concavity <i>/kənˈkævɪti/</i>	āo tū xìng
 conic section <i>/ˈkɒnɪk ˈsekʃn/</i>	yuán zhuī qū xiàn
 conjugate <i>/ˈkɒndʒuːgeɪt/</i>	gòng è
 conjugate pairs <i>/ˈkɒndʒuːgeɪt peəz/</i>	gòng è duì
 constant <i>/ˈkɒnstənt/</i>	cháng shù
context <i>/ˈkɒntekst/</i>	qíng jìng
 cosecant <i>/ˈkəʊsekənt/</i>	yú gē
 cosine <i>/ˈkəʊsaɪn/</i>	yú xián

English	Pinyin
 cotangent <i>/ˈkəʊtændʒənt/</i>	yú qiē
coterminal	zhōng biān xiāng tóng de
counterclockwise	nì shí zhēn
cross-section <i>/krɒs ˈsekʃn/</i>	héng jié miàn
 cycle <i>/ˈsaɪkl/</i>	xún huán
data points	shù jù diǎn
 decay factor <i>/dɪˈkeɪ ˈfæktə/</i>	shuāi jiǎn yīn zi
decompose	fēn jiě
 decreasing <i>/ˈdiːkriːsɪŋ/</i>	dì jiǎn
 degree <i>/dɪˈɡriː/</i>	cì shù
degrees <i>/dɪˈɡriːz/</i>	dù
 denominator <i>/dɪˈnɒmɪneɪtə/</i>	fēn mǔ
 dependent variable <i>/dɪˈpendənt ˈveəriəbl/</i>	yīn biàn liàng
 determinant <i>/dɪˈtɜːmɪnənt/</i>	háng liè shì
 dilation <i>/daɪˈleɪʃn/</i>	shēn suō
dimensions	wéi shù
direction <i>/daɪˈrekʃn/</i>	fāng xiàng
displacement <i>/dɪˈspleɪsmənt/</i>	wèi yí
 domain <i>/dəˈmeɪn/</i>	dìng yì yù
domain restriction	dìng yì yù xiàn zhì
 double-angle <i>/ˈdʌbl ˈæŋɡl/</i>	èr bèi jiǎo

English	Pinyin
double-angle identities	bèi jiǎo héng děng shì
eliminating	xiāo qù
 Ellipse <i>/ɪˈlɪps/</i>	tuǒ yuán
 end behavior <i>/end brˈheɪvjə/</i>	mò duān xíng wéi
 equilateral triangle <i>/ɪːkwɪˈlætərəl ˈtraɪæŋɡl/</i>	děng biān sān jiǎo xíng
 equivalent <i>/ɪˈkwɪvələnt/</i>	děng jià
 even <i>/ˈiːvən/</i>	ǒu hán shù
even-odd	jī ǒu
expanding <i>/ekˈspændɪŋ/</i>	zhǎn kāi
 explicit <i>/ekˈsplɪt/</i>	xiǎn shì
 exponential <i>/ˌekspəˈnenʃl/</i>	zhǐ shù
 exponential decay <i>/ˌekspəˈnenʃl dɪˈkeɪ/</i>	zhǐ shù shuāi jiǎn
 exponential equation <i>/ˌekspəˈnenʃl ɪˈkweɪʒn/</i>	zhǐ shù fāng chéng
 exponential function <i>/ˌekspəˈnenʃl ˈfʌŋkʃn/</i>	zhǐ shù hán shù
 exponential growth <i>/ˌekspəˈnenʃl grəʊθ/</i>	zhǐ shù zēng zhǎng
 exponential model <i>/ˌekspəˈnenʃl ˈmɒdl/</i>	zhǐ shù mó xíng
 exponential regression <i>/ˌekspəˈnenʃl rɪˈɡreʃn/</i>	zhǐ shù huí guī
 extraneous <i>/ekˈstreɪniəs/</i>	zēng gēn
 extrapolation <i>/ekˈstræpəleɪʃn/</i>	wài tuī
 factored form <i>/ˈfæktəd fɔːm/</i>	yīn shì fēn jiě xíng shì
 factoring <i>/ˈfæktərɪŋ/</i>	yīn shì fēn jiě

English	Pinyin
first difference	yī jiē chā fēn
force	lì
 frequency	pín lǜ
 function	hán shù
Fundamental Theorem of Algebra	dài shù jī běn dīng lǐ
 geometric sequence	děng bǐ shù liè
Geometrically	jǐ hé dì
 global (absolute) maximum	quán jú zuì dà zhí
 growth factor	zēng zhǎng yīn zì
 hole	kōng xīn
horizontal	shuǐ píng
 horizontal asymptote	shuǐ píng jiàn jìn xiàn
horizontal shift	shuǐ píng píng yí
horizontal stretch	shuǐ píng shēn suō
horizontal translations	shuǐ píng píng yí
 Hyperbola	shuāng qū xiàn
 identity function	héng děng hán shù
 identity matrix	dān wèi jǔ zhèn
image	xiàng
imaginary unit	xū shù dān wèi

English	Pinyin
 implicit	yǐn shì
 implicitly defined	yǐn shì dìng yì
increases	zēng dà
 increasing	dì zēng
 independent variable	zì biàn liàng
inequality	bù děng shì
infinity	wú qióng
 initial value	chū shǐ zhí
 input	shū rù
instantaneous rate of change	shùn shí biàn huà lǜ
intercept	jié jù
 inverse	fǎn hán shù
inverse cosine	fǎn yú xián
 inverse function	fǎn hán shù
 inverse matrix	nì jǔ zhèn
inverse sine	fǎn zhèng xián
inverse tangent	fǎn zhèng qiè
inverse transformation	nì biàn huàn
 inverse trigonometric functions	fǎn sān jiǎo hán shù
 invertible	kě nì

English	Pinyin
 leading coefficient <i>/ˈliːdɪŋ ˌkəʊɪˈfɪʃənt/</i>	shǒu xiàng xì shù
 leading term <i>/ˈliːdɪŋ tɜːm/</i>	shǒu xiàng
 limaçon	hān xiàn
 limit notation	jí xiàn jì hào
 linear <i>/ˈlɪniə/</i>	xiàn xìng
 linear function <i>/ˈlɪniə ˈfʌŋkʃn/</i>	xiàn xìng hán shù
 linear model <i>/ˈlɪniə ˈmɒdl/</i>	xiàn xìng mó xíng
 linear transformation <i>/ˈlɪniə trænsfɔːˈmeɪʃn/</i>	xiàn xìng biàn huàn
 local (relative) extremum <i>/ˈləʊkl ekˈstreməm/</i>	jú bù jí zhí
 $\log_2$ logarithm <i>/ˈlɒɡərɪθəm/</i>	duì shù
 logarithmic equation <i>/ˌlɒɡəˈrɪθmɪk rɪˈkweɪʒn/</i>	duì shù fāng chéng
 logarithmic function <i>/ˌlɒɡəˈrɪθmɪk ˈfʌŋkʃn/</i>	duì shù hán shù
 logarithmic model <i>/ˌlɒɡəˈrɪθmɪk ˈmɒdl/</i>	duì shù mó xíng
 logarithmic regression	duì shù huí guī
 logarithmic scale <i>/ˌlɒɡəˈrɪθmɪk skeɪl/</i>	duì shù kè dù
 long-run	cháng qī
 magnitude <i>/ˈmæɡnɪtjuːd/</i>	dà xiǎo
 mapping	yìng shè
 matrix <i>/ˈmeɪtrɪks/</i>	jǔ zhèn
 matrix multiplication <i>/ˈmeɪtrɪks ˌmʌltɪplɪˈkeɪʃn/</i>	jǔ zhèn chéng fǎ

English	Pinyin
 matrix transformation	jǔ zhèn biàn huàn
 maximum <i>/ˈmæksɪmə/</i>	zuì dà zhí
 midline <i>/ˈmɪdlə/</i>	zhōng xiàn
 minimum <i>/ˈmɪnɪmə/</i>	zuì xiǎo zhí
 model <i>/ˈmɒdl/</i>	mó xíng
 modeling <i>/ˈmɒdəlɪŋ/</i>	jiàn mó
 motion <i>/ˈməʊʃn/</i>	yùn dòng
 # multiplicity <i>/ˌmʌltɪˈplɪsɪti/</i>	chóng shù
 e natural base <i>/ˈnætʃərəl beɪs/</i>	zì rán dǐ shù
 $\ln$ natural log <i>/ˈnætʃərəl lɒɡ/</i>	zì rán duì shù
 $\ln$ natural logarithm <i>/ˈnætʃərəl ˈlɒɡərɪθəm/</i>	zì rán duì shù
 next state	xià yī zhuàng tài
 not commutative	bù kě jiāo huàn
 $\wedge$ numerator <i>/ˈnjuːməreɪtə/</i>	fèn zǐ
 * odd <i>/ɒd/</i>	jī hán shù
 $\rightleftarrows$ one-to-one <i>/wʌn tuː wʌn/</i>	yī yī duì yìng
 $\sim$ oscillate <i>/ˈɒsɪleɪt/</i>	zhèn dàng
 $\square$ output <i>/ˈaʊtpʊt/</i>	shū chū
 $\cap$ parabola <i>/pəˈræbələ/</i>	pāo wù xiàn
 () parameter <i>/pəˈræmɪtə/</i>	cān shù
 parameter interval	cān shù qū jiān

English	Pinyin
 parametric equations <i>/ˌpærə'metrik i'kweɪznz/</i>	cān shù fāng chéng
 parametric function <i>/ˌpærə'metrik 'fʌŋkʃn/</i>	cān shù fāng chéng hán shù
parametrization	cān shù huà
parent function	jī běn hán shù
path <i>/pæθ/</i>	lù jìng
 period <i>/'pɪəriəd/</i>	zhōu qī
 periodic <i>/ˌpɪəri'bdɪk/</i>	zhōu qī de
 phase shift <i>/feɪz'ʃɪft/</i>	xiàng wèi píng yí
 piecewise-defined function <i>/'piːswaɪz dɪ'faɪnd 'fʌŋkʃn/</i>	fēn duàn hán shù
plane <i>/pleɪn/</i>	píng miàn
plot <i>/plɒt/</i>	huì zhì
 point of inflection <i>/pɔɪnt ɒv ɪn'flekʃn/</i>	guǎi diǎn
 polar coordinates <i>/'pəʊlə kəʊ'ɔːdɪnəts/</i>	jí zuò biāo
 polar function <i>/'pəʊlə 'fʌŋkʃn/</i>	jí zuò biāo hán shù
 polar grid <i>/'pəʊlə grɪd/</i>	jí zuò biāo wǎng gé
pole <i>/pəʊl/</i>	jí diǎn
x^2 polynomial <i>/ˌpɒli'nəʊmɪəl/</i>	duō xiàng shì
x^2 polynomial function <i>/ˌpɒli'nəʊmɪəl 'fʌŋkʃn/</i>	duō xiàng shì hán shù
 polynomial long division <i>/ˌpɒli'nəʊmɪəl lɒŋ dɪ'vɪʒn/</i>	duō xiàng shì zhǎng chú fǎ
polynomial model	duō xiàng shì mó xíng

English	Pinyin
position vector <i>/pə'zɪʃn 'vektə/</i>	wèi zhì xiàng liàng
positive <i>/'pɒzɪtɪv/</i>	zhèng shù
 power rule <i>/'pəʊə ruːl/</i>	mì fǎ zé
powers	mì
probability <i>/ˌprɒbə'bɪlɪti/</i>	gài lǜ
$\times$ product rule <i>/'prɒdʌkt ruːl/</i>	chéng fǎ fǎ zé
properties of exponents	zhǐ shù yùn suàn fǎ zé
 proportional <i>/prə'pɔːʃənl/</i>	chéng bǐ lì
 Pythagorean identity <i>/'paɪθəɡoːrɪən aɪ'dentɪti/</i>	gōu gǔ héng děng shì
 quadrant <i>/'kwɒdrənt/</i>	xiàng xiàn
 quadratic <i>/kwɒ'drætɪk/</i>	èr cì
 quadratic function <i>/kwɒ'drætɪk 'fʌŋkʃn/</i>	èr cì hán shù
 quadratic model <i>/kwɒ'drætɪk 'mɒdl/</i>	èr cì mó xíng
$\div$ quotient <i>/'kwɒʃjənt/</i>	shāng
$\div$ quotient rule <i>/'kwɒʃjənt ruːl/</i>	chú fǎ fǎ zé
 radian <i>/'reɪdɪən/</i>	hú dù
radius <i>/'reɪdiəs/</i>	bàn jìng
$\updownarrow$ range <i>/reɪndʒ/</i>	zhí yù
 rate of change <i>/reɪt ɒv tʃeɪndʒ/</i>	biàn huà lǜ
ratio <i>/'reɪʃiəʊ/</i>	bǐ zhí

English	Pinyin
 rational function <i>/ˈræʃənl ˈfʌŋkʃn/</i>	yǒu lǐ hán shù
rational model	yǒu lǐ mó xíng
 reciprocals <i>/rɪˈsɪprəklz/</i>	dào shǔ
rectangular	zhí jiǎo zuò biāo
rectangular coordinates	zhí jiǎo zuò biāo
 recursive <i>/rɪˈkɜːsɪv/</i>	dì guī
reference angle	cān kǎo jiǎo
 reflection <i>/rɪˈflekʃn/</i>	fǎn shè
 remainder <i>/rɪˈmeɪndə/</i>	yú shù
 removable discontinuity <i>/rɪˈmuːvəbl dɪskɒntɪˈnjuːti/</i>	kě qù jiàn duàn diǎn
 residual <i>/rɪˈsɪdʒuːəl/</i>	cán chà
 residual plot <i>/rɪˈsɪdʒuːəl plɒt/</i>	cán chà tú
restricting	xiàn zhì
right <i>/raɪt/</i>	yòu
 root <i>/ruːt/</i>	gēn
 rose <i>/rəʊz/</i>	méi guī xiàn
rotation <i>/rəʊˈteɪʃn/</i>	xuán zhuǎn
rows	xíng
 scalar <i>/ˈskeɪlə/</i>	biāo liàng
 secant <i>/ˈsiːkənt/</i>	zhèng gē
 secant line <i>/ˈsiːkənt laɪn/</i>	gē xiàn

English	Pinyin
second difference	èr jiē chā fēn
 semi-log plot <i>/ˈsemi lɒg plɒt/</i>	bàn duì shù tú
 sequence <i>/ˈsiːkwəns/</i>	shù liè
sign	fú hào
 sine <i>/saɪn/</i>	zhèng xián
 sinusoidal function <i>/ˌsaɪnəˈsɔɪdl ˈfʌŋkʃn/</i>	zhèng xián xíng hán shù
 sinusoidal model <i>/ˌsaɪnəˈsɔɪdl ˈmɒdl/</i>	zhèng xián xíng mó xíng
 sinusoidal regression <i>/ˌsaɪnəˈsɔɪdl rɪˈɡreʃn/</i>	zhèng xián xíng huí guī
sketch	cǎo huì
 slant asymptote <i>/slænt ˈæsimptəʊt/</i>	xié jiàn jìn xiàn
 slope <i>/sləʊp/</i>	xié lǚ
slope of the secant line	gē xiàn
speed <i>/spiːd/</i>	sù dù
standard form <i>/ˈstændəd fɔːm/</i>	biāo zhǔn xíng shì
 standard position <i>/ˈstændəd pəˈzɪʃn/</i>	biāo zhǔn wèi zhì
 state <i>/steɪt/</i>	zhuàng tài
 state vector <i>/steɪt ˈvektə/</i>	zhuàng tài xiàng liàng
straight line	zhí xiàn
substitute <i>/ˈsʌbstɪtjuːt/</i>	dài rù
sum and difference identities	hé chà héng děng shì
 sum identities <i>/sʌm aɪˈdentɪtɪz/</i>	hé jiǎo gōng shì

English	Pinyin
Symmetry	duì chèn xìng
<i>/ˈsɪmətri/</i>	
system of linear equations	xiàn xìng fāng chéng zǔ
 tangent	zhèng qiē
<i>/ˈtændʒənt/</i>	
tangent line	qiè xiàn
<i>/ˈtændʒənt laɪn/</i>	
technology	jì shù
<i>/tekˈnɒlədʒi/</i>	
terms	xiàng
<i>/tɜːmz/</i>	
time	shí jiān
<i>/taɪm/</i>	
toward	kào jìn
transform	biàn huàn
<i>/trænsˈfɔːm/</i>	
 transformation	biàn huàn
<i>/trænsfɔːˈmeɪʃn/</i>	
 transition matrix	zhuǎn yí jǔ zhèn
<i>/trænˈsɪʃn ˈmeɪtrɪks/</i>	
 Translations	píng yí
<i>/trænˈsleɪʃnz/</i>	
trigonometric equation	sān jiǎo fāng chéng
<i>/ˌtrɪɡənəʊˈmetrɪk ɪˈkweɪʒn/</i>	
 unit circle	dān wèi yuán
<i>/ˈjuːnɪt ˈsɜːkl/</i>	
units	dān wèi
<i>/ˈjuːnɪts/</i>	
 vector	xiàng liàng
<i>/ˈvektə/</i>	
 vector-valued function	xiàng liàng zhí hán shù
<i>/ˈvektə ˈvæljuːd ˈfʌŋkʃn/</i>	
velocity	sù dù shǐ liàng
<i>/vəˈləsɪti/</i>	
Verify	yàn zhèng
vertex	dǐng diǎn
<i>/ˈvɜːteks/</i>	

English	Pinyin
vertex form	dǐng diǎn shì
vertical	shù zhí
<i>/ˈvɜːtɪkl/</i>	
 vertical asymptote	shù zhí jiàn jìn xiàn
<i>/ˈvɜːtɪkl ˈæsɪmptəʊt/</i>	
vertical line test	shù zhí xiàn jiǎn yàn
vertical shift	shù zhí píng yí
vertical stretch	shù zhí shēn suō
 zero	líng diǎn
<i>/ˈzɪərəʊ/</i>	