

AP Calculus AB

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

English	Pinyin
absolute maximum	zuì dà zhí
absolute minimum	zuì xiǎo zhí
absolute value	jué duì zhí
 acceleration	jiā sù dù
 accumulated change	lěi jī biàn huà
accumulates	lěi jī
 accumulation	lěi jī
 accumulation function	lěi jī hán shù
acres per week	yīng mǔ měi zhōu
additivity	kě jiā xìng
algebraic	dài shù de
algebraically	yòng dài shù fāng fǎ
alternate limit definition	bèi yòng jí xiàn dìng yì
analytical	jiě xī
 analytically	yòng jiě xī shì
 antiderivative	yuán hán shù
 antidifferentiation	qiú yuán hán shù
 approaches	qū jìn
 arbitrarily	rèn yì dì

English	Pinyin
arctangent	fǎn zhèng qiè
 area	miàn jī
 at a single instant	shùn jiān
 at rest	jìng zhǐ
 average rate of change	píng jūn biàn huà lǜ
 average value	píng jūn zhí
axis of revolution	xuán zhuàn zhóu
base region	dǐ miàn qū yù
 behavior	xìng tài
biology	shēng wù xué
boundary points	fēn jiè diǎn
bounds	jiè
 Candidates Test	hòu xuǎn diǎn pàn bié fǎ
 Chain Rule	liàn shì fǎ zé
 change	biàn huà
choosing the right rule	xuǎn zé zhèng què de fǎ zé
classifying	fēn lèi
 closed circle	shí xīn yuán
combine fractions	tōng fēn
complete the square	pèi fāng fǎ
 completing the square	pèi fāng fǎ

English	Pinyin
 composite <i>/ˈkɒmpəzɪt/</i>	fù hé de
 composite function <i>/ˈkɒmpəzɪt ˈfʌŋkʃn/</i>	fù hé hán shù
 composition <i>/ˈkɒmpəˈzɪʃn/</i>	fù hé
 concave down <i>/kɒnˈkeɪv daʊn/</i>	xià āo
 concave up <i>/kɒnˈkeɪv ʌp/</i>	shàng āo
 concavity <i>/kənˈkævɪti/</i>	āo tū xìng
 conditions	tiáo jiàn
 conjugate <i>/ˈkɒndʒuːgeɪt/</i>	gòng è
 consistent <i>/kənˈsɪstənt/</i>	yí zhì
 constant multiple <i>/ˈkɒnstənt ˈmʌltɪpl/</i>	cháng shù bèi
 constant of integration <i>/ˈkɒnstənt ɒv ˌɪntɪˈɡreɪʃn/</i>	jī fēn cháng shù
 constant rule	cháng shù fǎ zé
 constraint <i>/kənˈstreɪnt/</i>	yuē shù tiáo jiàn
 context <i>/ˈkɒntekst/</i>	qíng jìng
 continuous <i>/kənˈtɪnjuːəs/</i>	lián xù
 continuous extension	lián xù yán tuò
 continuous on an interval <i>/kənˈtɪnjuːəs ɒn ən ˈɪntəvl/</i>	zài qū jiān shàng lián xù
 corner <i>/ˈkɔːnə/</i>	jiān jiǎo
 counterexample	fǎn lì
 critical point <i>/ˈkrɪtɪkl pɔɪnt/</i>	lín jiè diǎn

English	Pinyin
 cross section <i>/krɒs ˈsekʃn/</i>	héng jié miàn
 cubic <i>/ˈkjuːbɪk/</i>	sān cì fāng chéng
 curve	qū xiàn
 cusp <i>/kʌsp/</i>	jiān diǎn
 decision order	jué cè shùn xù
 decreases	dì jiǎn
 decreasing <i>/ˈdiːkriːsɪŋ/</i>	jiǎn xiǎo
 definite integral <i>/ˈdefɪnət ˈɪntɪgrəl/</i>	dìng jī fēn
 definite integral notation	dìng jī fēn jì hào
 degrees <i>/diˈɡriːz/</i>	cì shù
 denominator <i>/diˈnɒmɪneɪtə/</i>	fēn mǔ
 dependent variable <i>/diˈpendənt ˈveəriəbl/</i>	yīn biàn liàng
 derivative <i>/diˈrɪvətɪv/</i>	dǎo shù
 derivative notation	dǎo shù jì hào
 difference quotient <i>/ˈdɪfrəns ˈkwɒʃənt/</i>	chà shāng
 difference rule	chà fǎ zé
 differentiable <i>/ˈdɪfərənʃiəbl/</i>	kě wēi
 differentiable functions	kě wēi hán shù
 differential equation <i>/ˌdɪfəˈrenʃl ɪˈkweɪʒn/</i>	wēi fēn fāng chéng
 differentiate <i>/ˌdɪfəˈrenʃiət/</i>	qiú dǎo
 direct substitution <i>/daɪˈrekt ˌsʌbstɪˈtjuːʃn/</i>	zhí jiē dài rù

English	Pinyin
 direction <i>/daɪ'rekʃn/</i>	biàn huà fāng xiàng
 disc <i>/disk/</i>	yuán pán
 disc method <i>/disk 'meθəd/</i>	yuán pán fǎ
 discontinuity <i>/diskontɪ'nju:ɪti/</i>	jiàn duàn diǎn
 discontinuous <i>/diskən'tɪnju:əs/</i>	jiàn duàn
 displacement <i>/di'spleɪsmənt/</i>	wèi yí
domain <i>/də'meɪn/</i>	dìng yì yù
 domain restrictions <i>/də'meɪn rɪ'strɪkʃnz/</i>	dìng yì yù xiàn zhì
 dominant <i>/'domɪnənt/</i>	zhǔ dǎo
 economics <i>/i:kə'nɒmɪks/</i>	jīng jì xué
 elementary derivatives <i>/ɛlɪ'mentəri dɪ'rɪvətɪvz/</i>	jī běn dǎo shù
elementary functions	jī běn chū děng hán shù
 end behavior <i>/end br'heɪvjə/</i>	mò duān xíng wéi
endpoints	duān diǎn
equilibrium <i>/i:kwi'brɪəm/</i>	píng héng
 equivalent form <i>/'kwɪvələnt fɔ:m/</i>	děng jià xíng shì
equivalent rectangle	děng xiào jǔ xíng
 estimate <i>/'estɪmət/</i>	gū jì zhí
 existence theorem <i>/eg'zɪstəns 'θɪərəm/</i>	cún zài xìng dìng lǐ
exponent <i>/ek'spəʊnənt/</i>	zhǐ shù
 exponential <i>/ɛkspə'nenʃl/</i>	zhǐ shù hán shù

English	Pinyin
 exponential decay <i>/ɛkspə'nenʃl dɪ'keɪ/</i>	zhǐ shù shuāi jiǎn
 exponential growth <i>/ɛkspə'nenʃl grəʊθ/</i>	zhǐ shù zēng zhǎng
 exponential growth and decay <i>/ɛkspə'nenʃl grəʊθ ænd dɪ'keɪ/</i>	zhǐ shù zēng zhǎng yǔ shuāi jiǎn
 exponential model <i>/ɛkspə'nenʃl 'mɒdl/</i>	zhǐ shù mó xíng
 extrema <i>/ek'stremə/</i>	jí zhí
 Extreme Value Theorem <i>/ek'stri:m 'vælju: 'θɪərəm/</i>	jí zhí dìng lǐ
factor <i>/'fæktə/</i>	tí qǔ gōng yīn shì
 factor and cancel <i>/'fæktə ænd 'kænsəl/</i>	yīn shì fēn jiě yǔ yuē fēn
final value	zuì zhōng zhí
 First Derivative Test <i>/fɜ:st dɪ'rɪvətɪv test/</i>	yī jiē dǎo shù pàn bié fǎ
 first principles <i>/fɜ:st 'prɪnsɪplz/</i>	yòng dìng yì qiú dǎo
 formula <i>/'fɔ:mjələ/</i>	gōng shì
function value	hán shù zhí
 Fundamental Theorem of Calculus <i>/fʌndə'mentl 'θɪərəm ɒv 'kælkjʊləs/</i>	wēi jī fēn jī běn dìng lǐ
 general solution <i>/'dʒenərəl sə'lu:ʃn/</i>	tōng jiě
geometrically	jǐ hé shàng
 geometry <i>/dʒɪ'bɒmətri/</i>	jǐ hé
given	yǐ zhī
 graph <i>/græf/</i>	tú xiàng
graphical	tú xiàng

English	Pinyin
 graphically <i>/ˈgræfɪkli/</i>	yòng tú xiàng
 higher-order derivatives <i>/ˈhaɪə ˈɔːdə diˈrɪvətɪvz/</i>	gāo jiē dǎo shù
 hole <i>/həʊl/</i>	kōng dòng
 horizontal asymptote <i>/ˌhɒrɪˈzɒntl ˈæsɪmptəʊt/</i>	shuǐ píng jiàn jìn xiàn
horizontal slices	shuǐ píng qiē piàn
 Implicit differentiation <i>/ɪmˈplɪsɪt ˌdɪfəˈrenʃiˈeɪʃn/</i>	yǐn hán shù qiú dǎo
implicitly defined <i>/ɪmˈplɪsɪtli dɪˈfaɪnd/</i>	yǐn shì dìng yì de
 inconclusive <i>/ɪŋkənˈkluːsɪv/</i>	wú fǎ pàn dīng
increases	dì zēng
 increasing <i>/ɪnˈkriːsɪŋ/</i>	zēng dà
 indefinite integral <i>/ɪnˈdefɪnət ˈɪntɪgrəl/</i>	bù dìng jī fēn
independent variable <i>/ˌɪndɪˈpendənt ˈveəriəbl/</i>	zì biàn liàng
 indeterminate form <i>/ˌɪndɪˈtɜːmɪnət fɔːm/</i>	bù dìng shì
 infinite discontinuity <i>/ˈɪnfɪnət dɪskɒntɪˈnjuːɪti/</i>	wú qióng jiàn duàn diǎn
 infinite limits <i>/ˈɪnfɪnət ˈlɪmɪts/</i>	wú qióng jí xiàn
 initial condition <i>/ɪˈnɪʃl kənˈdɪʃn/</i>	chū shǐ tiáo jiàn
initial value <i>/ɪˈnɪʃl ˈvæljuː/</i>	chū shǐ zhí
inner function	nèi hán shù
 inner radius <i>/ˈɪnə ˈreɪdiəs/</i>	nèi bàn jìng
 instantaneous <i>/ˌɪnstənˈteɪniəs/</i>	shùn shí

English	Pinyin
 instantaneous rate of change <i>/ˌɪnstənˈteɪniəs reɪt ɒv tʃeɪndʒ/</i>	shùn shí biàn huà lǜ
 integral <i>/ˈɪntɪgrəl/</i>	jī fēn
integrand	bèi jī hán shù
integrate <i>/ˈɪntɪgreɪt/</i>	jī fēn
integration <i>/ˌɪntɪˈɡreɪʃn/</i>	jī fēn
 Intermediate Value Theorem <i>/ˌɪntəˈmiːdiət ˈvæljuː ˈθɪərəm/</i>	jiè zhí dìng lǐ
intersect <i>/ˌɪntəˈsekt/</i>	xiāng jiāo
intersection points	jiāo diǎn
 interval <i>/ˈɪntəvl/</i>	qū jiān
 inverse function <i>/ɪnˈvɜːs ˈfʌŋkʃn/</i>	fǎn hán shù
 inverse trigonometric functions <i>/ɪnˈvɜːs ˌtrɪɡənəʊˈmetrɪk ˈfʌŋkʃnz/</i>	fǎn sān jiǎo hán shù
 jump <i>/dʒʌmp/</i>	tiào yuè
 jump discontinuity <i>/dʒʌmp dɪskɒntɪˈnjuːɪti/</i>	tiào yuè jiàn duàn diǎn
 L'Hospital's Rule <i>/ˈelhospɪtlz ruːl/</i>	luò bì dá fǎ zé
layered	fēn céng de
 left-hand limit <i>/left hænd ˈlɪmɪt/</i>	zuǒ jí xiàn
Leibniz notation	lái bù ní cí jì hào
 limit <i>/ˈlɪmɪt/</i>	jí xiàn
limit at infinity	wú qióng yuǎn chù de jí xiàn
limit definition	jí xiàn dìng yì

English	Pinyin
 limit laws <i>/ˈlɪmɪt lɔːz/</i>	jí xiàn fǎ zé
 limit theorems <i>/ˈlɪmɪt ˈθɪərəməz/</i>	jí xiàn dìng lǐ
[] limits of integration <i>/ˈlɪmɪts ɒv ˌɪntɪˈɡreɪʃn/</i>	jī fēn xiàn
line segment <i>/laɪn ˈseɡmənt/</i>	xiàn duàn
 linear approximation <i>/ˈlɪniə əˌprɒksɪˈmeɪʃn/</i>	xiàn xìng jìn sì
 linearity <i>/lɪˈnɪərɪti/</i>	xiàn xìng xìng zhì
 linearization <i>/ˌlɪniərəɪˈzeɪʃn/</i>	xiàn xìng huà
↕ local (relative) extrema <i>/ˈləʊkl ekˈstreɪmə/</i>	jú bù jí zhí
 local linearity <i>/ˈləʊkl lɪˈnɪərɪti/</i>	jú bù xiàn xìng xìng
 local maximum <i>/ˈləʊkl ˈmæksɪməm/</i>	jí dà zhí
∨ local minimum <i>/ˈləʊkl ˈmɪnɪməm/</i>	jí xiǎo zhí
 logarithmic <i>/ˌlɒɡəˈrɪθmɪk/</i>	duì shù
long division	zhǎng chú fǎ
» long-term behavior <i>/lɒŋ tɜːm biˈheɪvjə/</i>	cháng qī xíng wéi
marginal cost <i>/ˈmɑːdʒɪnl kɒst/</i>	biān jì chéng běn
 Mean Value Theorem <i>/miːn ˈvæljuː ˈθɪərəm/</i>	zhōng zhí dìng lǐ
Mean Value Theorem for Integrals	jī fēn zhōng zhí dìng lǐ
memorizing	jì yì
method <i>/ˈmeθəd/</i>	fāng fǎ
• midpoint <i>/ˈmɪdpoɪnt/</i>	zhōng diǎn

English	Pinyin
Multiply by the conjugate	gòng è
↔ net change <i>/net tʃeɪndʒ/</i>	jìng biàn huà
T notations <i>/nəʊˈteɪʃnz/</i>	jì hào
numerator <i>/ˈnjuːməreɪtə/</i>	fēn zǐ
numerical	shù zhí
 numerically <i>/njuːˈmerɪkli/</i>	yòng shù zhí
⟨⟩ one-sided limits <i>/wʌn ˈsaɪdɪd ˈlɪmɪts/</i>	dān cè jí xiàn
◯ open circle <i>/ˈəʊpən ˈsɜːkl/</i>	kōng xīn yuán
operator <i>/ˈɒpəreɪtə/</i>	yùn suàn fú
 optimization <i>/ˌɒptɪmaɪˈzeɪʃn/</i>	zuì yōu huà
order <i>/ˈɔːdə/</i>	shùn xù
≍ oscillates <i>/ˈɒsɪleɪts/</i>	zhèn dàng
outer function	wài hán shù
◯ outer radius <i>/ˈaʊtə ˈreɪdiəs/</i>	wài bàn jìng
^ overestimate <i>/ˌəʊvəˈrestɪmət/</i>	gāo gū
() parameter <i>/pəˈræmɪtə/</i>	cān shù
 particular solution <i>/pəˈtɪkjələ səˈluːʃn/</i>	tè jiě
piecewise functions	fēn duàn hán shù
 piecewise-defined function <i>/ˈpiːswaɪz dɪˈfaɪnd ˈfʌŋkʃn/</i>	fēn duàn hán shù
point	diǎn

English	Pinyin
 point of inflection <i>/pɔɪnt ɒv ɪn'flekʃn/</i>	guǎi diǎn
$\times^2$ polynomial <i>/ˌpɒli'nəʊmiəl/</i>	duō xiàng shì
$\div$ polynomial long division <i>/ˌpɒli'nəʊmiəl lɒŋ dɪ'vɪʒn/</i>	duō xiàng shì zhǎng chú fǎ
population growth	zhǒng qún zēng zhǎng
 position <i>/pə'zɪʃn/</i>	wèi zhì
 power <i>/'paʊə/</i>	mì
power / root	mì yǔ gēn
 Power Rule <i>/'paʊə ru:l/</i>	mì fǎ zé
power rule for integration	jī fēn mì fǎ zé
prime notation	piē hào jì hào
 procedure <i>/prə'si:dʒə/</i>	bù zhòu
product <i>/'prɒdʌkt/</i>	chéng jī
$\times$ Product Rule <i>/'prɒdʌkt ru:l/</i>	chéng jī fǎ zé
proportional <i>/prə'pɔːʃənl/</i>	chéng zhèng bǐ
quotient <i>/'kwɒʃənt/</i>	shāng
$\div$ Quotient Rule <i>/'kwɒʃənt ru:l/</i>	shāng fǎ zé
radians <i>/'reɪdɪənz/</i>	hú dù
$\sqrt{}$ radical <i>/'rædɪkl/</i>	gēn shì
radioactive decay <i>/ˌreɪdɪəʊ'æktɪv dɪ'keɪ/</i>	fàng shè xìng shuāi biàn
radius <i>/'reɪdɪəs/</i>	bàn jìng

English	Pinyin
rate <i>/reɪt/</i>	biàn huà lǚ
 rate of change <i>/reɪt ɒv tʃeɪndʒ/</i>	biàn huà lǚ
ratio of leading coefficients	shǒu xiàng xì shù zhī bǐ
$\div$ ratio of the leading coefficients <i>/'reɪʃiəʊ ɒv ðə 'liːdɪŋ ˌkəʊɪ'fɪʃənts/</i>	shǒu xiàng xì shù zhī bǐ
$\div$ rational expression <i>/'ræʃənəl ɛk'spreʃn/</i>	yǒu lǐ shì
$\div$ rational function <i>/'ræʃənəl 'fʌŋkʃn/</i>	yǒu lǐ hán shù
rationalize	yǒu lǐ huà
reasonable <i>/'riːzənəbl/</i>	hé lǐ
reasonableness	hé lǐ xìng
$\div$ reciprocal <i>/rɪ'sɪprəkl/</i>	dào shǔ
redefine	chóng xīn dìng yì
reflection <i>/rɪ'flekʃn/</i>	fǎn shè
 related rates <i>/rɪ'leɪtɪd reɪts/</i>	xiāng guān biàn huà lǚ
 relative magnitudes <i>/'relatɪv 'mæɡnɪtjuːdz/</i>	xiāng duì dà xiǎo
relative maximum	jí dà zhí
relative minimum	jí xiǎo zhí
 removable discontinuity <i>/rɪ'muːvəbl dɪskɒntɪ'njuːɪti/</i>	kě qù jiàn duàn diǎn
representation	biǎo shì xíng shì
rewrite	gǎi xiě
rewrite them with identities	héng děng shì

English	Pinyin
 Riemann sum <i>/ˈri:mən sʌm/</i>	lí màn hé
 right-hand limit <i>/raɪt hænd ˈlɪmɪt/</i>	yòu jí xiàn
rightmost curve	zuì yòu qū xiàn
root <i>/ru:t/</i>	gēn
rule <i>/ru:l/</i>	fǎ zé
sanity check	kuài sù jiǎn yàn
 scale <i>/skeɪl/</i>	bǐ lì
 secant line <i>/ˈsi:kənt laɪn/</i>	gē xiàn
 second derivative <i>/ˈsekənd dɪˈrɪvətɪv/</i>	èr jiē dǎo shù
 Second Derivative Test <i>/ˈsekənd dɪˈrɪvətɪv test/</i>	èr jiē dǎo shù pàn bié fǎ
 semicircle <i>/ˈseɪmɪs:kl/</i>	bàn yuán
 separable <i>/ˈsepərəbl/</i>	kě fēn lí de
 separation of variables <i>/ˌsepəˈreɪʃn ɒv ˈveəriəblz/</i>	fēn lí biàn liàng fǎ
sign	fú hào
sign analysis	fú hào fēn xī
 sign chart <i>/saɪn tʃɑ:t/</i>	fú hào biǎo
 signed area <i>/saɪnd ˈeəriə/</i>	dài fú hào miàn jī
 slope <i>/sləʊp/</i>	xié lǚ
 slope field <i>/sləʊp fi:ld/</i>	xié lǚ chǎng
slowing down	yuè lái yuè màn
 solid of revolution <i>/ˈsɒlɪd ɒv ˌrevəˈlu:ʃn/</i>	xuán zhuǎn tǐ

English	Pinyin
 solution <i>/səˈlu:ʃn/</i>	jiě
 solution curve <i>/səˈlu:ʃn kɜ:v/</i>	jiě qū xiàn
 speed <i>/spi:d/</i>	sù lǚ
speeding up	yuè lái yuè kuài
 Squeeze Theorem <i>/skwi:z ˈθɪərəm/</i>	jiā bī dīng lǐ
strategy <i>/ˈstrætədʒi/</i>	cè lüè
 subintervals <i>/ˌsʌbɪnˈtɜ:vɪlz/</i>	zì qū jiān
substitute <i>/ˈsʌbstɪtju:t/</i>	dài rù
 sufficiently <i>/səˈfɪʃəntli/</i>	zú gòu
sum	tī xíng fǎ
sum / difference	hé chà
sum of integrals	jī fēn zhī hé
sum or difference	hé huò chà
sum rule	hé fǎ zé
 summation notation <i>/sʌˈmeɪʃn nəʊˈteɪʃn/</i>	qiú hé jì hào
symmetric difference quotient	duì chèn chà shāng
 table <i>/ˈteɪbl/</i>	biǎo gé
 tangent line <i>/ˈtændʒənt laɪn/</i>	qiè xiàn
 time <i>/taɪm/</i>	shí jiān
toolbox	gōng jù xiāng
total distance traveled	zǒng lù chéng

English	Pinyin
 Total distance travelled <i>/ˈtəʊtl ˈdɪstəns ˈtrævld/</i>	zǒng lù chéng
 trapezoidal rule <i>/ˈtræpɪzɔɪdl ruːl/</i>	tī xíng fǎ zé
 triangle <i>/ˈtraɪæŋɡl/</i>	sān jiǎo xíng
 trigonometric <i>/ˌtrɪɡənəʊˈmetrɪk/</i>	sān jiǎo hán shù
 two-sided limit <i>/tuː ˈsaɪdɪd ˈlɪmɪt/</i>	shuāng cè jí xiàn
 u-substitution <i>/juː ˌʌbstɪˈtjuːʃn/</i>	huàn yuán fǎ
 unbounded <i>/ʌn ˈbaʊndɪd/</i>	wú jiè
 underestimate <i>/ˌʌndəˈrestɪmət/</i>	dī gū
 units <i>/ˈjuːnɪts/</i>	dān wèi
 upper curve	shàng qū xiàn
 variable <i>/ˈveəriəbl/</i>	biàn liàng
 variable upper limit	kě biàn shàng xiàn
 velocity <i>/vəˈlɒsɪti/</i>	sù dù
 verbal	wén zì
 verify	yàn zhèng
 vertical asymptote <i>/ˈvɜːtɪkl ˈæsɪmptəʊt/</i>	shù zhí jiàn jìn xiàn
 vertical tangent <i>/ˈvɜːtɪkl ˈtændʒənt/</i>	shù zhí qiè xiàn
 volume <i>/ˈvɒljʊːm/</i>	tǐ jī
 washer <i>/ˈwɒʃə/</i>	diàn juàn
 washer method <i>/ˈwɒʃə ˈmeθəd/</i>	diàn juàn fǎ
 with respect to	guān yú

English	Pinyin
 zeros <i>/ˈzɪərəʊz/</i>	líng diǎn