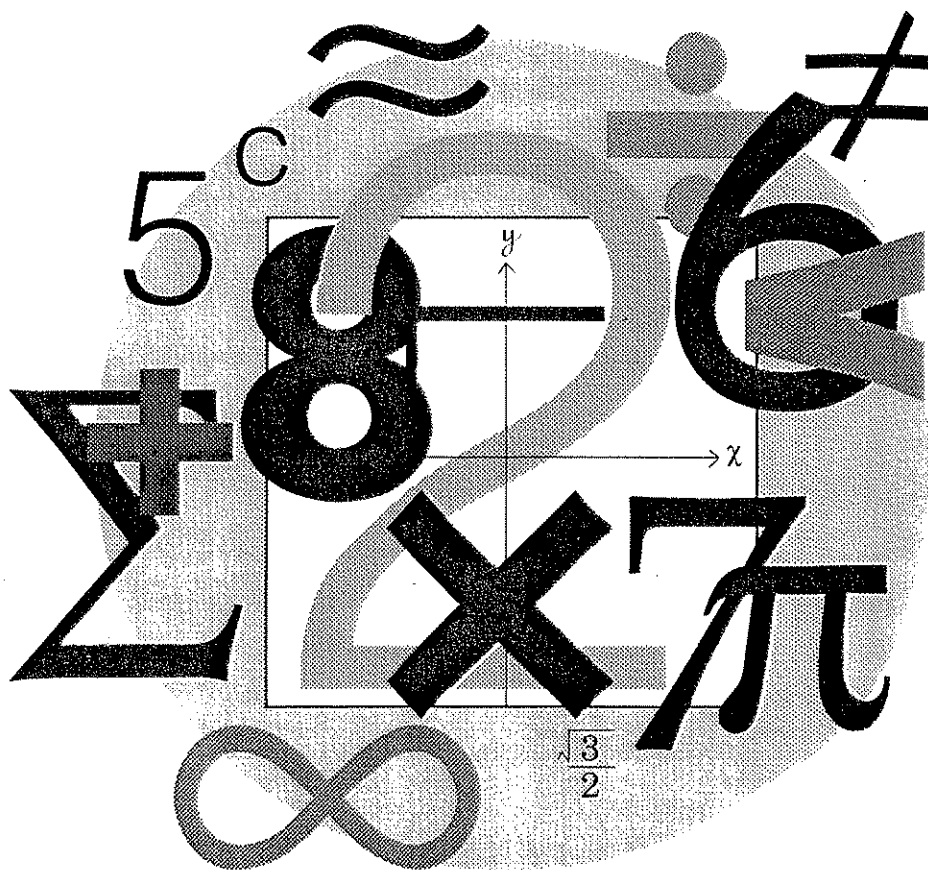


High School Mathematics Glossary Calculus



English-Chinese

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**HIGH SCHOOL
MATHEMATICS GLOSSARY**

CALCULUS

ENGLISH - CHINESE

高中英漢數學詞匯手冊
微積分

Chinese/Asian Bilingual Education Technical Assistance Center
Division of Bilingual Education
Board of Education of the City of New York
1995

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INTRODUCTION

The *High School English-Chinese Mathematics Glossary: Calculus* was developed to assist the limited English proficient Chinese high school students in understanding the vocabulary that is included in the New York City High School Calculus Curriculum. To meet the needs of the Chinese students from different regions, both traditional and simplified character versions are included. The bilingual mathematics teachers may also use this glossary as reference material.

This is one of a series of English-Chinese glossaries that is being developed by the Chinese/Asian Bilingual Education Technical Assistance Center (CABETAC), Division of Bilingual Education, Board of Education of the City of New York. The project is made possible by a grant from the Office of Bilingual Education, New York State Education Department.

The following is a list of the glossary series. The Mathematics and Science glossaries will be available by the end of May, 1995. The Social Studies glossaries will be available by the end of September, 1995.

The Mathematics Series:

- Integrated Mathematics (Course I)
- Integrated Mathematics (Course II)
- Integrated Mathematics (Course III)
- Pre-calculus
- Calculus

The Science Series:

- High School General Science
- Junior High School Science
- Chemistry
- Physics
- Biology

The Social Studies Series:

- Global History 1
- Global History 2
- Global History 3
- Global History 4
- American Government
- American History 1
- American History 2

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简 体 字 版

**SIMPLIFIED
CHARACTERS**

A

abscissa of absolute convergence

绝对收敛的横坐标

abscissa of convergence 收敛横坐标

absolute continuity 绝对连续性

absolute convergence 绝对收敛性

absolute differential 绝对微分

absolute error 绝对误差

absolutely convergent series 绝对收敛级数

abstract number 不名数; 抽象数

accelerating convergence 加速收敛

addition of ordinates 纵坐标相加

alternate function 交代函数

alternate notation 交错记号

alternating method 交错法

alternation series 交错级数

analytic curve 解析曲线

antiderivative 反导数; 反微商

antidifferential 反微分

anti-isomorphism 反同构

approach a limit 趋向於一极限

approximate continuity 近似连续

approximate integration 近似积分

approximately continuous 近似连续

approximating function [可]逼近函数

approximation by least squares

用最小二乘方的近似

approximation in the mean 平均逼近

arbitrary function 任意函数

arcsec function 反正割函数

arcsin function 反正弦函数

arctan function 反正切函数

asymptotic convergence 渐近收敛

asymptotic curvature 渐近曲率

auxiliary variable 辅助变数

B

binomial differential 二项式微分

bounded interval 有界区间

binomial series 二项级数

C

- calculus 微积分; 计算
- center of curvature 曲率中心
- central quadric 有心二次曲面
- central difference interpolation
中心差分插值法
- closed interval 闭区间
- cofactor 余因子
- colatitude 余纬度
- complete integrability 完全可积性
- complete integral 完全积分
- complete limite 完全极限
- complex integration 复积分
- complex series 复级数
- conditionally convergent series 条件收敛级数
- condition of integrability 可积条件
- conic section 圆锥曲线; 二次曲线
- consecutive points 相邻点
- constant of integration 积分常数
- constrained extreme value 约束极值
- constrained maxima and minima
约束极大和极小值
- continuity from above 上连续
- continuity from below 下连续
- continuous arc 连续弧
- continuous convergence 连续收敛
- continuous curve 连续曲线
- continuous integral 连续积分
- continuous variable 连续变量
- continuously differentiable function
连续可微函数
- continuum 连续统; 闭联集
- convergence domain 收敛域
- convergence from above 由上收敛性
- convergence from below 由下收敛性
- convergence in mean 平均收敛
- convergent 收敛的
- convergent integral 收敛积分
- convergent series 收敛级数
- correlation function 相关函数
- cross product 叉积; 向量积
- cosine integral 余弦积分
- critical point 临界点

critical value of function 函数临界值

cross ratio 交比; 非调和比

crossing zero 相交零点

cubic convergence 三次收敛

cubic function 三次函数

curvature vector 曲率向量

cuspidal point 尖点; 歧点

cycloid 旋轮线; 摆线

cylindrical coordinates 柱面坐标

cylindrical polar coordinate 柱(面)极坐标

cylindrical shell 圆柱壳

D

- decay 衰变; 衰退
- decomposition 分解
- define implicitly 隐定义
- definite integral 定积分
- degeneracy 蜕化; 退化
- degenerate 退化的
- degenerate differential equation 退化微分方程
- degenerate variables 退化变量
- degree of convergence 收敛度
- degree of freedom 自由度
- denotation 外延, 所指
- dense everywhere 处处稠密
- derived curve 导出曲线
- derivate 导数
- derivation of algebra 代数的求导运算
- derivative 导数; 微商
- derivative discontinuity 导数的; 不连续性
- derivatives of higher order
高阶导数; 高阶微商
- derivative on the left 左导数; 左微商
- derivative on the right 右导数; 右微商
- derivative order 微分阶
- derived equation 导出方程
- differentiable 可微的
- differentiable curve 可微分曲线
- differentiable function 可微分函数
- differentiability 可微性
- differential 微分
- differential and integral calculus 微积分
- differential calculus 微分(学)
- differential coefficient 微分系数; 微商
- differential divisor 微分因子
- differential equation of first order
一阶微分方程
- differential equation 微分方程
- differential equation of higher order
高阶微分方程
- differential expression 微分式
- differential of arc 微弧; 弧元素
- differential of area 面积元素
- differential polynomial 微分多项式
- differentiate 求微分; 微分

differentiation 微分法	discarding finite numbers 去掉有限个数
differentiating operator 微分算子	discontinuity 间断性; 不连续性
differentio-integral equation 微分积分方程	discontinuous 不连续; 间断的
digital integration 数字积分	discontinuous distribution 不连续分布
directed segment 有向线段	discontinuous function 不连续函数
directed tangent 有向切线	divergent 发散的; 差异的
directed tangent line 有向切线	double cusp 双尖点
directional derivative 方向导数; 方向微商	double series 二重级数
direction angle 方向角	dot product 点积
direction numbers 方向数	dummy variable 虚变数
direction reversal 反转方向	

E

eigenvalue 特征向量; 特征值

element of the integral 积分元素

ellipsoid 椭面; 椭球

ellipsoid of revolution 回转椭(圆)面; 回转椭球

elliptic cone 椭圆锥面

elliptic paraboloid 椭圆抛物面

equivalence class 等价类

Euler line 欧拉线

even-numbered terms 双数项

exact differential 恰当微分; 正合微分

exponential decay 呈指数退化

extreme value theorem 极值定理

F

finite discontinuity 有限不连续性

first derivation 一阶求导; 一阶求微

first integral 初积分

frustum 平截头体; 平截头墩; 平截头台

frustum of a cone 平截头圆锥体

frustum of a pyramid 平截头棱锥体

fundamental lemma 基本引理

functional limit 函数极限

G

general derivative 一般导数; 一般微商

generalized limit 广义极限

generalized theorem of mean 广义平均值定理

generator of cylinder 柱的母线

gradient 斜率; 倾斜量; 梯度

gradient vector 梯度向量

graphical integration 图解积分法

grid 格子; 网路

gyrate 圆形的; 盘旋的; 回转; 旋转

gyration 回转; 旋转

H

half-open interval 半开区间

harmonic 调和的

helix 螺旋; 螺旋线

hemicontinuous 半连续的

hemisphere 半球

higher derivative 高阶导数; 高阶微商

hyperbolic cosine 双曲余弦

hyperbolic paraboloid 双曲抛物面

hyperboloid 双曲面

I

- immediate inference 直接推理
- immediate integration 直接积分法
- implicit definition 隐定义
- implicit difference equations 隐式差分方程
- implicit differentiation 隐微分法
- implicit function 隐函数
- implicit method 隐合法
- improper integral 非正常积分; 广义积分
- improper maximum 非正常极大
- improper minimum 非正常极小
- inclination of line 直线的倾角或斜角
- increase without bound 无限增加
- indefinite integration 不定积分法
- indeterminate forms 不定形式; 未定形式
- index of summation 和的指数
- indirect differentiation 间接微分法
- inertial coordinates 惯性坐标
- infinite integral 无穷积分
- infinite point 无限远点; 无穷远点
- infinitely small 无穷小; 无限小
- infinitely great 无穷大; 无限大
- infinitely near 无穷近; 无限近
- infinitely near points 无限接近点
- infinitesimal 无穷小; 无限小
- infinitesimal element 无穷小元素
- infinity 无限大; 无穷
- inflection point 拐点; 回折点
- initial velocity vector 初速向量
- inner derivation 内部求导
- instantaneous velocity 瞬时速度
- integrable 可积分的
- integrable function 可积分函数
- integrability 可积性
- integral calculus 积分学
- integral constant 积分常数
- integral curve 积分曲线
- integral differential equation 积分微分方程
- integral differential operation 积分微分运算
- integral inequality 积分不等式
- integral invariant 积分不变式
- integral operation 积分运算
- integrand 被积分函数

integrating factor 积分因子

integration 积分

integration by partial fraction

部分分式积分法

integration by parts 分部积分法

integration by substitution

代换积分法; 换元积分法

integration constant 积分常数

intermediate differential 中间微分

intermediate value theorem 中间值定理

intermediate variables 中间变数

invariant integral 不变积分

inverse operator 逆算子

involute 渐伸线; 切展线

involute of circle 圆的渐伸线

irregular region 不规则区域

iterated integral 叠积分

L

- Largrange multiplier 拉格朗日乘子
- least square method 最小平方方法
- left continuous function 左连续函数
- left derivative 左导数
- left-hand continuity 左方连续性
- left-hand derivative 左微商; 左方导数
- left-hand limit 左方极限
- left-handed system 左旋坐标系
- left limit 左极限
- limacon 蚶线
- limit of function 函数的极限
- limit superior 上极限
- limitable 可求极限的
- limited function 有界函数
- limiting function 极限函数
- limiting point 极限点
- limiting position 极限位置
- line at infinity 无穷远线
- line of best fitting 最适合直线
- logarithmic 对数的
- logarithmic differentiation 对数微分
- lower integral 下积分

M

Maclaurin series 马克劳林级数

minimax approximation 极小极大逼近

momentum vector 动力向量

multiple integral 多重积分

N

nappe 叶

neighborhood of a point 点的邻域

normal 正规; 垂直; 正交; 法线; 正态

normal integral 正规积分

normal to the curve 曲线的法线

O

oblate ellipsoid 扁椭面, 扁椭球

oblate spheroid 扁球面; 扁球

oblateness 扁率

odd-numbered terms 单数项

one-sided approximation 单侧逼近

one-side limit from the left 左单侧极限

one-sided limits 单侧极限

oppositely oriented 方位相反

orientation 定方向

osculating circle 密切圆

osculating plane 密切面

osculation 密切

outward derivative 外向导数; 外导数; 外微商

P

parabolic cylinder 抛物柱面

paraboloid 抛物面

paraboloid of revolution 回转抛物面

parametric 参数的

parametric derivative 参数导数; 参数微商

partial derivative 偏导数; 偏微商

partial fraction 部份分式

point of discontinuity 不连续点; 间断点

point of division formula 分点公式

point of density 密集点

point of inflection 拐点; 回折点

point of reference 参考点; 基准点

positive infinite 正无限大

power function 幂函数; 功效函数

power series 幂级数

principal derivative 主导数; 主微商

principal normal vector 主法向量

prismoid 平截头棱锥体

prismoidal formula 平截头棱锥体公式

projection of v on w v 在 w 的投影

prolate spheroid 长球; 长球面

Q

quadric 二次曲面; 二次

R

radius of curvature 曲率半径

radius of gyration 回转半径

rectangular grid 矩形格子

rectifiable 可求长的

rectifiable arc 可求长的弧

rectifiable curve 可求长的曲线;有长曲线

rectification 求长法

regular integral 正则积分;正常积分

regular tetrahedron 正四面形

related rates 相关变率

relative maximum 相对极大值

relative minimum 相对极小

repeated integral 累积分

repeated summation 累次求和

restrictedly convergent 限制收敛

right differential coefficient 右微商

right continuous function 右连续函数

right-handed coordinate system 右方坐标系

right-hand derivative 右微商;右导数

right-hand system 右手系

round-off error 舍入误差

S

- saddle point 鞍点
- sandwich digit 中间数字; 中间位数
- schematic 图解的; 纲要的
- second derivative 第二阶导数
- semi-closed interval 半闭区间
- semi-closure 半闭[合]
- sexadecimal system 十六进制
- signature function 符号函数
- similarly oriented 方位相同
- slope function 斜率函数; 坡度函数
- solid of revolution 回转体
- solid of rotation 旋转体
- spherical coordinates 球面坐标
- spheroid 球体
- spiral of Archimedes 阿基米德·螺线
- step by step integration 逐步积分
- strophoid 环索线
- subdifferentiable 次可微分
- subscripts for function 添标函数
- successive derivative 逐次微商, 逐次导数
- successive differentiation 逐次微分
- successive integration 逐次积分
- surface of revolution 回转曲面

T

tangential 切线的; 正切的

Taylor expansion 泰勒展开式

Taylor polynomial 泰勒各项式

Taylor series 泰勒定理

tend to L 趋近L值

term by term differentiation 逐项微分

term by term integration 逐项积分

termwise differentiation 逐项微分

termwise integration 逐项积分

theorem of pappus 冠毛定理

transverse 横的; 横轴的; 横截; 横轴

transverse axis of hyperbola

双曲线的横截轴

translation of axes 坐标轴平移

trigonometric substitution 三角代换

triple integral 三重积分

trivial solution 平凡解

two-sided limit 双边极限

U

unbounded interval 无界区间

uniform continuity 一致连续性

unilateral continuity 单向连续[性]

unilateral limits 单侧极限

uniqueness of limit 极限的唯一性

upper limit 上限

U

variable of integration 积分变数

vicinity of a point 点的邻近

volume integral 体积积分

W

weighting coefficients 加权系数

weighting function 加权函数

weighted means 加权平均值