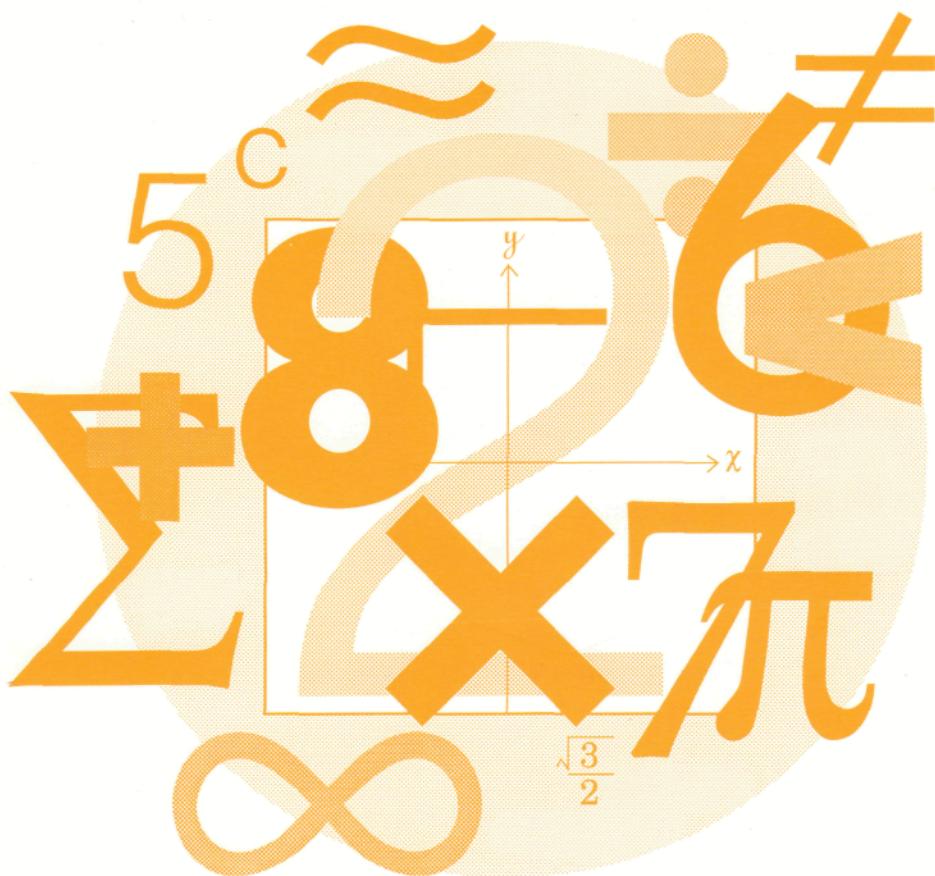


High School Mathematics Glossary

Pre-calculus



English-Chinese



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HIGH SCHOOL MATHEMATICS GLOSSARY

PRE-CALCULUS

ENGLISH - CHINESE

**高中英漢數學詞匯手冊
微積分預科**

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

INTRODUCTION

The *High School English-Chinese Mathematics Glossary: Pre-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 Pre-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

For information or recommendation, contact CABETAC office, Division of Bilingual Education, c/o Seward Park High School, 350 Grand Street, Room 518, New York, NY 10002, Tel: (212) 677-0493 Fax: (212) 677-0398.

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繁 體 字 版

TRADITIONAL
CHARACTERS

A

abridge division 捷除法	ambiguous sign 分歧號; 重號
abridged multiplication 捷乘法	amplitude of a periodic function 週期函數振幅
abridged notation 簡記法	amplitude of function 函數振幅
abridged proof 捷證法	analogue 摸擬
adjacent vertices 相鄰頂點	analogue calculator 摸擬計算器
adjoining figure 伴隨圖形	analogue multiplier 摸擬乘法
adjoining rectangles 伴隨矩形	angle of inclination 斜角
adjoining Venn diagram 伴隨文氏圖	angle of incidence 入射角
adjoint determinant 伴隨行列式	angle of parallelism 平行角
adjusted proportionally 調整比例	angle of reflection 反射角
admissible error 容許誤差	anharmonic ratio 交比; 非調和比; 重比
advance estimate 事前估計值	anticommutative property 反交換性質
algebraic cone 代數錐; 代數錐面	antilogarithm 反對數
algebraic spiral 代數螺旋	approximate convergence 近似收斂
algebraically complete 代數封閉	approximate expansion 近似展開式
alternate determinant 交錯行列式	approximate the norm 近似範數; 近似規格
alternating positive and negative 正負交錯(排列)	arbitrary parameter 任意參數
alternative formula 擇一公式	arbitrary sequence 任意數列
alternative symbolism 擇一符號	arithmetic progression 算術級數
ambiguous data 模棱資料	arithmetic series 算術級數
	arithmetical series 算術級術; 等差級數

array 陣列; 數組	asymptotically equal 漸近相等
assertion 斷定	asymptotically equivalent 漸近等價
associative axiom 結合公理	augmented matrix 增廣矩陣
astroid 星形線	automorphic 自同構的; 自守的
asymmetrical step function 非對稱階梯函數	automorphic function 自守函數
asymptotic 漸近的	automorphism 自同構
asymptotic approximation 漸近逼近法	auxiliary circle 輔[助]圓
asymptotic characteristic 漸近特性	axiom of comparison 比較公理
asymptotic circle 漸近圓	axiomatic 公理的
asymptotic series 漸近級數	axioms of order 秩序公理

B

base vectors 基向量	bound for the magnitude 對數量的界限
basis vector 基本向量	boundary 界; 邊界; 邊緣
binomial distribution 二項分配	boundary complex 邊界複形
binomial theorem 二項式定理	boundary line 界綫
biorthogonal 雙正交	boundary maxima and minima 邊緣極大和極小
bisecant 二度割綫	boundary of half-plane 半平面的界限
block of digits 一組數字	bounded 有界的
Boolean algebra 布爾代數	bounded above 上有界的
Boolean expression 布爾表達式	bounded below 下有界的
Boolean factor 布爾因子	Briggsian logarithm 常用對數
bound 界; 邊界; 約束	

C

cardioid 心臘線	comparison function 比較函數
center of curvature 曲率中心	complement of set 補集
characteristic cone 特徵錐; 特徵錐面	completeness 完全性
characteristic constant 特徵常數	completeness of axiom systems 公理系統的完全性
characteristic curve 特徵[曲]綫	components of a vector 向量的分量
characteristic determinant 特徵行列式	composite determinant 合成行列式
characteristic equation 特徵方程	composite matrix 合成[矩]陣
characteristic function 特徵函數	composition of probabilities 概率合成
characteristic root 特徵根	composition of vectors 向量的合成
characteristic vector 特徵向量	coefficient of correlation 相關系數
circle of curvature 曲率圓	coincidence 叠合; 重合
closed half-plane 閉半平面	coincidence number 叠合數
closed interval 閉區間	incident lines 重合直線
coefficient matrix 係數矩陣	column matrix 列矩陣
cofunction 餘函數	concave downward 凸向下的
cologarithm 餘對數	concave upward 凸向上的
column vector 列向量	conchoid 蟆續
common difference 公差	conditional convergence 條件收斂
common divisor 公約數	conditionally convergent 條件收斂
common or Briggsian logarithms 常用對數	conditional probability 條件機率
common ratio 公比	

conic	二次曲線的; 圓錐的	consistency of linear equation
conic projection	二次曲線投影	綫性方程的相容性
conic section	圓錐曲線; 二次曲線	consistent 相容的; 一致的; 無矛盾的
conic with center	有心二次曲線	constant polynomial 常數多項式
conic without center	無心二次曲線	continuity 連續性
conical point	錐頂點	continuous function 連續函數
conical function	圓錐函數	convergence 收斂
conicoid	二次曲面	convergent 收斂的
conjugate angle	共軛角	convergent geometric series 收斂幾何級數
conjugate arc	共軌弧	convergent sequence 收斂序列
conjugate axis	共軌軸	conversion equations 轉換方程
conjugate conics	配極二次曲線; 共軌二次曲線	convex domain 凸域
conjugate curves	共軌曲線	convex region 凸區域
conjugate hyperbolas	共軌雙曲線	convexity 凸性
conjugate hyperboloids	共軌雙曲面	coplanar vector 共面向量
conjugate imaginary	共軌虛數	coprime 互素數
conjugate lines	共軌直線	core 柱心
conjugate lines in a conic		counterexample 反例
	二次曲線的共軌直線	critical point 臨界點
conjugate matrice	共軌[矩]陣	cross line 正交線
conjugate of function	函數的共軌	crystallographic group 結晶體群
conjugate pairs	共軌數對	crystallographic axes 結晶體軸
conjugate points	共軌點	cubic curve 三次曲線
conjugate radicals	共軌根式(數)	cubic equation 三次方程
		cubic polynomial 三次多項式

cubic surface	三次曲面	curve of distribution	分配曲線
cuboid	長方體	cycloid	旋輪線;擺線
curvature	曲率	cyclotomic	割圓
curvature invariant	曲率不變式	cylinder	柱;柱面
curvature of a conic	二次曲線的曲率	cylindrical helix	柱面螺旋線
curvature of graph	圖形的曲率	cylindrical projection	圓柱投影

D

De Moiver's Theorem 棣美弗定理	determinant rank 行列式秩
decreasing degree 次數遞減	determinantal 行列式的
decreasing function 遞減函數	determinantal expansion 行列式展開
decreasing sequence 下降序列	diagonal coefficients 對角系數
decreasing series 遞減級數	diagonal element 對角元素
deductive logic 演繹邏輯	dimensions of matrix 矩陣的維數
degenerate critical point 退化臨界點	direction angles 方向角
degenerate conic 退化二次曲線	direction coefficient 方向係數
degenerated curve 退化曲線	direction component 方向分量
degree of freedom 自由度	direction cosine 方向餘弦
demand matrix 需求矩陣	direction numbers 方向數
denumerable 可數的	direction vector 方向向量
denying premise 否定前題	directrix 準線
dependent random event 相依隨機事件	discontinuous function 不連續函數
dependent variable 應變數	disjoint sequences 不相交的序列
Descartes' rule of signs 笛卡兒正負號規則	displacement 移位; 剛體運動
determinate 行列式	displacement of n unites to the left 向左移n單位
determinant divisor 行列式因子	distinct elements 不同的元素
determinant factor 行列式因子	distinct limits 不同的極限
determinant of coefficient 系數行列式	divergence 發散性; 散度; 發散量
determinant of transformation 變換行列式	

divergent 發散的

divergent arbitrarily large 發散到任意大

divergent series 發散級數

double-angle identity 倍角恒等式

double ratio 交比; 非調和比

E

eccentric angle 離心角; 偏心角	escribed circle 旁切圓
eccentric circle 離心圓	Euler circle 歐拉圓
eccentricity 離心率; 偏心率	Euler's equation 歐拉方程
eight-leaved rose curve 八瓣玫瑰綫	even function 偶函數
element of matrix 矩陣的元素	excircle 外圓
elliptic 橢圓的; 橢圓形的	exclusive 不可兼; 排除; 排斥
elliptic cylinder 橢圓柱面	exclusive events 互斥事件
ellipse 橢圓	exhaustion 窮舉
entry 進入; 通路; 表值	expanded form 展開式
equilateral hyperbola 等軸雙曲線; 直角雙曲線	expansion in series 級數展開
equilibrium 平衡	expansion of a determinant 行列式的展開
equivalent sequences 等價序列	expected revenue 期望收益
error correction 誤差校正; 累錯	expected value 期望值
error estimate 誤差估計	exponential series 指數級數
escenter of a triangle 三角形的旁心	exterior product 外積
escribe 旁切	external ratio 外分比

F

finite progression 有限級數	focal ellipse 焦橢圓
finite sequence 有限數列	focal radius 焦半徑
finite series 有限級數	focoid 虛圓點
five-leaved rose curve 五瓣玫瑰線	folium 葉形線
focal axis 焦軸	formal axiomatics 形式公理學
focal chord 焦弦	frequency of occurrence 出現次數
focal circle 焦圓	function of dispersion 分散函數
focal conic 焦點二次曲線	fundamental direction vector 基本向量
focal distance 焦距	

G

Gaussian Elimination 高斯消去法

generator 母線; 生成元

geometric means 幾何平均數

geometric progression 幾何級數

geometric projection 幾何投影

geometrical series 幾何級數; 等比級數

geometry of the sphere 球面幾何

greatest lower bound 最大下界

group theory 群論

H

half-angle identities 半角恒等式

heterogeneous 不純一的; 參差

harmonic mean 調和平均; 調和中項; 調和中數

homogeneity 齊性

harmonic motion 調和運動

homogeneous 齊性[的]; 齊次; 齊的

harmonic progression 調和級數

homogeneous equation 齊次方程

harmonic ratio 調和比

homogeneous linear equation 齊次線性方程式

harmonic series 調和級數

hyperbolic spiral 雙曲螺旋

harmonics 調和函數

hypothetical models 擬設模式

helicoid 螺旋面

I

icosahedron	二十面體	induction hypothesis	歸納假設
identity matrix	單位方陣	infinite determinant	無窮行列式
identity function	恒等函數	infinite dimensional	無限維
identity mapping	恒等映射	infinite discontinuity	無窮不連續點
identity matrix of order n	n秩單位矩陣	infinite quantity	無窮量
imaginary ellipsoid	虛橢圓面; 虛橢球	infinite sequence	無窮數列
imaginary intersection	虛相交	infinite series	無窮級數
imaginary part	虛部	infinite trigonometric series	無限三角級數
imaginary sphere	虛球	inflection	拐折; 回折
immediate predecessor	緊接前元	inflection point	拐點; 回折點
immediate successor	緊接後元	initial column	初始列
immediate vicinity	緊接的部份	initial point	始點
improper conic	退化二次曲線	inner product	內積
improper quadric	退化二次曲面	input coefficient	輸入係數
improper subset	假子集	input-output matrix	輸入輸出矩陣
inaccessible number	不可達數	inscribed polyhedron	內接多面體
incidence matrix	關聯矩陣	inscribed prism	內接棱柱
inclined plane	斜面	inscribed square	內接正方形
increase steadily	穩定增加	integral multiple	整數倍
increasing without bound	無界增加	integralization	整化
indicated limit	所指的極限	interchanging coordinates	座標交換

intermediate convergent 中間收斂	inverse circular function 反三角函數
interpolation by central difference	inverse matrix 逆[矩]陣
中差插值法	inverse rotations 逆轉; 反轉
interrelationship 相互關係	inverted sequence 逆序; 反序
intersection of solution sets 解集之交	invertible matrix 可逆[矩]陣
invariant 不變; 不變式; 不變量	irreducible over F 在F係不可約
invariant under rotation 旋轉不變量	

J

joint occurrence 聯合出現	linear combination 一次組合; 線性組合
Lagrange's interpolation formula 拉格朗日插值公式	linear correlation 線性相關
lattice 格	linear interpolation 線性插值法
leading term 首項	linear minimization 線性極小化
least limit 最小極限	linear relation 一次關係; 線性關係
lemniscate 雙紐線	lituus 連鎖螺線
limit 極限	local maximum 局部極大
limit of function 函數的極限	logarithmic function 對數函數
limit of sequence 數列的極限	logarithmic spiral 對數螺線
line of curvature 曲率線	lower bound 下界
line of reference 參考線; 基礎; [直]線	loxodrome 斜駛線

M

m-fold factor	m重因式	mixed-product	混合積
major axis	長軸	monotone decreasing	單調遞減
matrix	矩陣; 真值表	monotone function	單調函數
matrices	矩陣(多數)	monotone increasing	單調遞增
matrix algebra	[矩]陣代數	monotone sequence	單調序列
matrix equation	矩陣方程式	multiple factors	多因子
matrix of coefficients	系數矩陣	multiplication of determinants	行列式乘法
minor axis	短軸	multiplication of vectors	向量乘法
minor of a determinant	子行列式	multiplicity of root	根的階; 根的重數

N

n-dimensional space	n維空間	nonparallel vectors	不平行向量
Napierian logarithms	自然對數; 訥皮爾對數	nonoverlapping subsets	不相交子集合
nephroid	腎臟線	nonvertical lines	非垂直直線
Newton's method	牛頓法	normal distribution	常態分配
non-degenerate circle	常態圓	normal curvature	法曲率
non-degenerated curve	常態曲線	normal probability distribution	常態機率分配
noncoincident parallel lines	不重合平行線	n^{th} power	n 次幕
nondecreasing	不減少的	null function	零函數
nondecreasing convergent sequence		null matrix	零矩陣
非減收斂序列		numerical determinant	數字行列式

O

odd function 奇函數	orthogonal component 正交分量
odd-numbered term 奇數項	orthogonal cone 正交錐面
one-side limit from the right 右單側極限	orthogonal coordinates 正交坐標
opposite in signs 符號相反	orthogonal vectors 正交向量
order 階	orthogonalization 正交化
order of a determinant 行列式的階	orthonormal vectors 正交單位向量
order of a matrix [矩]陣階	orthorhombic 斜方晶系的
oriented direction 有向距離	oscillatory series 振蕩級數
orthogonal 正交的;直角的;矩形的	outer product 外積
orthogonal circles 正交圓	oval 卵形線

P

parabolic curve 抛物曲綫	polar curve 配極曲綫; 極坐標曲綫
parameter 參數; 參變量	polar distance 極距
parametric equation 參數方程式	polar equation 極方程
partial sum 部份和	polar form 極形式; 極型
pericycloid 周擺線	polar form of complex number 複數的極式
periodic changes 週期變化	polar normal 極法綫
periodic function 週期函數	polar radius 極半徑
perform successively 連續運算	pole 極; 極點
permutation matrix 置換矩陣; 排列矩陣	polycylinder 多圓柱
perpendicular component 垂直分量	polydisc 多圓柱
perpendicular component of a vector 向量的垂直分量	polyhedral angle 多面角
phase shift 相移	polyhedral convex cone 多面凸錐
point of increase 增點	polyhedroid 多面體
point of inflection 拐點; 反凹點; 變曲點	polynomial function 多項式函數
point sphere 點球	polynomial interpolation 多項式內插法
polar 極的; 極面; 極綫	polynomial over the field F F體上多項式
polar angle 極角	portion of a series 級數的部份
polar axis 極軸	preceding term 前項
polar coordinates 極坐標	preserve validity 有效性不變
polar coordinates in the plane 平面極坐標	prime linear factor 一次質因子; 線性質因子

prime linear polynomial over C	principal vector 主向量
C中的素一項式	probability distribution 機率分配
primitive function 原函數	production matrix 積矩陣
principal axis 主軸	progression 級數
principle of inference 推理原理	projective geometry 投影幾何
principal value 主值	proof by contradiction 矛盾證明法; 反證法
principal value of arcsine 反正弦函數主值	provide a counterexample 舉一反例

Q

quartic 四次

quintic 五次

quintic equation 五次方程

quintuple space 五維空間

R

radical axis	根軸; 等幂軸	reduced matrix	簡化矩陣
radical center	根心; 等幂心	reducible over F	在F中化簡
radical circl	根圓	reduction formulas	歸約公式; 化簡公式
radical exponent	根指數	regression line	迴歸直線
rank	秩	regular matrix	正則矩陣
random experiment	隨機試驗	relative maximum or minimum	
random variables	隨機變數		相對極大或極小
rank of a determinant	行列式的秩	relative maximum point	相對極大點
rank of matrix	矩陣的秩	relative minimum point	相對極小點
rigid body	剛體	relatively prime	相對互質
reciprocal function	倒函數; 互反函數	remainder theorem	餘式定理
rectangle rule with left end points		resolvable	可解; 可解決
	左端點矩形法	resolution of vectors	向量的分解
rectangle rule with midpoints	中點矩形法	resolving vector	分解向量
rectangular array	矩陣列; 長方陣列	reversion of a series	級數的反演
rectangular matrix	矩陣	revolution	回轉
recurring series	循環級數	root of multiplicity K	K重根
recursion	遞歸(式); 遞推; 循環	roster of the elements of a set	
recursion formula	遞推公式; 遞歸公式		列出集中元素
recursive	遞歸的	rotating coordinate axes	旋轉座標軸
recursive definition	遞歸定義; 遞推定義	rotating cylinder	旋轉柱體

rotation about the origin 繞原點旋轉	row rank 行秩
row matrix 行矩陣	row vector 行向量
row operation 行運算	

S

same orientation 同定向	shift to the right 向右移
scalar 純量; 數量; 無向量	shifting 移位
scalar multiple 純量相乘	simplicity of notation 記號簡化
scalar multiple of a vector 向量和純量乘積	Simpson's rule 辛浦森法
scalar multiplication 純量乘法	sine wave 正弦波
scalar product of vectors 向量分量的乘積	sinusoid 正弦曲線
scale equation 標度方程; 尺度方程	skew 斜; 偏斜
schematic diagram 圖表; 圖解; 略圖	sliding vector 滑動向量
self-orthogonal 自成正交	spiral 螺線; 蟠線
semimajor axes 半長軸	spiral of Archimedes 阿基米得螺線
semiminor axes 半短軸	square array 正方陣列
semiperimeter 半周長	square matrix 方陣
separating point 分離點	square matrix of order 方陣階
sequence 序列	standard deviation 標準差
series 級數	standard position 標準位置
series expansion 級數展開	stereographic projection 球極平面射影
serpentine 蛇形綫	stochastic matrix 隨機矩陣
serpentine curve 蛇形綫	straight line approximation method 直線近似法
set theory 集合論	
sextic 六次綫; 六次	straight line of infinity 無限直線
sextic equation 六次方程	subdeterminant 子[行列]式

subinterval 子區間	superior limit 上限
subsequence 子序列; 部份序列	symmetric equation 對稱方程
subseries 子級數	symmetrical determinant 對稱行列式
subtend (弦; 邊; 角等)對向(弧或對角等)	synonym 同義語
subtense 弦; 對邊	synthetic 綜合; 合成
succeeding term 次一項	synthetic division 綜合除法
summation sign 求和符號; 連加號	synthetic - substitution 綜合代換(法)
summation symbol 求和符號	

T

tangent plane 切面	transpose 轉置; 移項
tangent vector 切向量	transposed matrix 轉置矩陣
terminal point 終點	transverse axis 橫截軸
terminal ray 終邊	trapezoidal 梯形的; 不規則四邊形的
terminal row 末行	trapezoidal rule 梯形法
tetragonal 四角形的; 四邊形的	triangle inequality 三角不等式
theory of numbers 數論	triangular array 三角陣列; 三角數組
three-leaved rose curve 三瓣玫瑰線	triangular surface 三角平面
topology 拓樸學	trigonometric open sentences 三角開放句
transition matrix 轉移矩陣	trifolium 三葉綫
transitive property of order 秩序的遞移性	trochoid 次擺綫

U

uncertainty relation 不定關係

unconditional convergence 無條件收斂

unconditional inequality 無條件不等式

unconditionally convergent 無條件收斂的

underdeterminant 子行列式

uncorrelated variables 不相關變量

uniform continuity 一致連續性

uniform convergence 一致收斂

uniform divergence 一致發散

unit matrix 單位[矩]陣

unit angle 單位角

unit vector 單位向量

universe of variable 泛變數; 全變數

upper bound 上界

upper sum 上界和

unreduced matrix 不可約矩陣

V

variation of sign 符號變更

Venn diagram 文氏圖

vector angle 向量角

vertical force upward 垂直向上的力

vector inner product 向量內積

virtual asymptotic line 假漸近線

vector product 向量積

virtual circle 假圓

vector space 向量空間

variation 變分; 變差

velocity of particle 質點(運動)速度

X

x approaches c x趨近c

Z

zero matrix 零矩陣

zero polynomial 零多項式