# International Baccalaureate · IB Diploma · Mathematics: Applications and Interpretation · HL

Glossary · every term in the course, A–Z

## English

acceleration
/əkˌselə'reɪʃn/
adjacency matrix

alternative hypothesis
/ɔːl'tɜːnətɪv haɪ'pɒθəsɪs/
amortised

amplitude
/'æmplɪtjuːd/
angle of depression
/'æŋgl ɒv dɪ'preʃn/
angle of elevation
/'æŋgl ɒv ˌelɪ'veɪʃn/
annuity
/ə'njuːɪti/
arc
/ɑːk/
Argand diagram
/'ɑːgænd 'daɪəgræm/
argument
/'ɑːgjuːmənt/
arithmetic sequence
/ə'rɪθmətɪk 'siːkwəns/
assumption
/ə'sʌmpʃn/
asymptote
/'æsɪmptəʊt/
axis of symmetry
/'æksɪs ɒv 'sɪmətri/
bearing
/'beərɪŋ/
box plot
/bɒks plɒt/



## English

carrying capacity
/'kæriɪŋ kə'pæsɪti/
cell
/sel/
central limit theorem
/'sentrəl 'lɪmɪt 'θɪərəm/
chain rule
/tʃeɪn ruːl/
characteristic polynomial

chi-squared test
/kaɪ skweəd test/
Chinese postman problem

coefficient of determination
/ˌkəʊɪ'fɪʃənt ɒv dɪˌtɜːmɪ'neɪʃn/
common difference
/'kɒmən 'dɪfrəns/
common ratio
/'kɒmən 'reɪʃɪəʊ/
complete graph

complex conjugate
/'kɒmpleks 'kɒndʒuːgeɪt/
complex number
/'kɒmpleks 'nʌmbə/
composite function
/'kɒmpəzɪt 'fʌŋkʃn/
compound interest
/'kɒmpaʊnd 'ɪntrest/
conditional probability
/kən'dɪʃənl ˌprɒbə'bɪlɪti/
cone
/kəʊn/
confidence interval
/'kɒnfɪdəns 'ɪntəvl/
connected
/kə'nektɪd/
constant of integration
/'kɒnstənt ɒv ˌɪntɪ'greɪʃn/

## English

contingency table
/kən'tɪndʒənsi 'teɪbl/
continuous data

cosine rule
/'kəʊsaɪn ru:l/
coupled system

critical region
/'krɪtɪkl 'ri:dʒn/
critical value
/'krɪtɪkl 'vælju:/
cumulative frequency
/'kju:mjʊlətɪv 'fri:kwənsi/
decreasing
/'di:kri:sɪŋ/
definite integral
/'defɪnət 'ɪntɪgrəl/
degree
/dɪ'gri:/
degrees of freedom
/dɪ'gri:z ɒv 'fri:dəm/
deposit
/dɪ'pɒzɪt/
depreciation
/dɪˌpri:ʃɪ'eɪʃn/
derivative
/dɪ'rɪvətɪv/
determinant
/dɪ'tɜ:mɪnənt/
differential equation
/ˌdɪfə'renʃl ɪ'kweɪʒn/
directed graph

directly proportional
/daɪ'rektli prə'pɔ:ʃənl/
discrete data

discrete random variable
/dɪ'skri:t 'rændəm 'veərɪəbl/
displacement
/dɪ'spleɪsmənt/



## English

domain
/də'meɪn/
edge
/edʒ/
eigenvalue
/'aɪgənvælju:/
eigenvector
/'aɪgənvektə/
enlargement
/en'lɑ:dʒmənt/
equilibrium point

Euler's method
/'ɔɪlə 'meθəd/
Eulerian circuit

Eulerian trail

expected value
/ek'spektɪd 'vælju:/
exponential model
/ˌekspə'nenʃl 'mɒdl/
extrapolation
/ek'stræpəleɪʃn/
frequency density
/'fri:kwənsi 'densɪti/
function
/'fʌŋkʃn/
geometric sequence
/ˌdʒi:ə'metrɪk 'si:kwəns/
goodness of fit test

gradient
/'greɪdɪənt/
graph
/ɡræf/
half-life
/hɑ:f laɪf/
Hamiltonian cycle

hemisphere
/'hemɪsfɪə/

## English

hypotenuse
/haɪˈpɒtənjuːs/
identity matrix
/aɪˈdentɪti ˈmeɪtrɪks/
increasing
/ɪnˈkriːsɪŋ/
independent
/ˌɪndɪˈpendənt/
inflation
/ɪnˈfleɪʃn/
initial condition
/ɪˈnɪʃl kənˈdɪʃn/
integration
/ˌɪntɪˈgreɪʃn/
integration by parts
/ˌɪntɪˈgreɪʃn baɪ pɑːts/
internal assessment

interpolation
/ɪnˌtɜːpəˈleɪʃn/
interquartile range
/ˌɪntəˈkwɔːtaɪl reɪndʒ/
inverse function
/ɪnˈvɜːs ˈfʌŋkʃn/
inverse matrix
/ɪnˈvɜːs ˈmeɪtrɪks/
inversely proportional
/ɪnˈvɜːsli prəˈpɔːʃənl/
iteration
/ˌɪtəˈreɪʃn/
Kruskal's algorithm
/ˈkrʌskl ˈælgərɪθəm/
linear model
/ˈlɪnɪə ˈmɒdl/
local maximum
/ˈləʊkl ˈmæksɪməm/
local minimum
/ˈləʊkl ˈmɪnɪməm/
log-log graph



## English

logarithm
/ˈlɒgərɪθəm/
logistic model
/ləˈdʒɪstɪk ˈmɒdl/
lower bound
/ˈləʊə baʊnd/
magnitude
/ˈmægnɪtjuːd/
Markov chain

mathematical
communication
mathematical exploration

matrix
/ˈmeɪtrɪks/
mean
/miːn/
median
/ˈmiːdiːən/
midpoint
/ˈmɪdpɔɪnt/
minimum spanning tree
/ˈmɪnɪməm ˈspænɪŋ triː/
mode
/məʊd/
model
/ˈmɒdl/
moderation

modulus
/ˈmɒdjʊləs/
multiplier
/ˌmʌltɪˈplaɪə/
mutually exclusive
/ˈmjuːtʃuːəli eksˈkluːsɪv/
natural logarithm
/ˈnætʃərəl ˈlɒgərɪθəm/
nearest neighbour
interpolation

## English

normal
/'nɔ:ml/
normal distribution
/'nɔ:ml ˌdɪstrɪ'bju:ʃn/
null hypothesis
/nʌl haɪ'pɒθəsɪs/
one-tailed
/wʌn teɪld/
outlier
/'aʊtlaɪə/
parallel
/'pærəlel/
period
/'pɪərɪəd/
perpendicular
/ˌpɜ:pən'dɪkjʊlə/
perpendicular bisector
/ˌpɜ:pən'dɪkjʊlə baɪ'sektə/
personal engagement

phase portrait

point of inflection
/pɔɪnt ɒv ɪn'flekʃn/
Poisson distribution
/'pɔɪsn ˌdɪstrɪ'bju:ʃn/
population
/ˌpɒpjʊ'leɪʃn/
position vector
/pə'zɪʃn 'vektə/
presentation
/ˌprezən'teɪʃn/
Prim's algorithm
/prɪmz 'ælgərɪθəm/
primary data
/'praɪmərɪ 'deɪtə/
prime factor
/praɪm 'fæktə/
principal axis
/'prɪnsɪpl 'æksɪs/



## English

probability
/ˌprɒbə'bɪlɪti/
product rule
/'prɒdʌkt ru:l/
pyramid
/'pɪrəmɪd/
quadratic model
/kwɒ'drætɪk 'mɒdl/
quartile
/'kwɔ:taɪl/
quotient rule
/'kwəʊʃənt ru:l/
radian
/'reɪdɪən/
range
/reɪndʒ/
reflection
/rɪ'flekʃn/
reflection
/rɪ'flekʃn/
regression line
/rɪ'greʃn laɪn/
reliable
/rɪ'laɪəbl/
research question
/rɪ'sɜ:tʃ 'kwestʃn/
residual
/rɪ'sɪdʒu:əl/
resultant
/rɪ'zʌltənt/
rotation
/rəʊ'teɪʃn/
saddle point

sample
/'sæmpl/
sample space
/'sæmpl speɪs/
scalar product
/'skeɪlə 'prɒdʌkt/

## English

scale factor
/skeɪl 'fæktə/
scatter diagram
/'skætə 'daɪəgræm/
secant
/'si:kənt/
second derivative
/'sekənd dɪ'rɪvətɪv/
secondary data

sector
/'sektə/
semi-log graph

separation of variables
/ˌsepə'reɪʃn ɒv 'veərɪəblz/
sequence
/'si:kwəns/
series
/'sɪəri:z/
significance level
/sɪg'nɪfɪkəns 'levl/
significant figure
/sɪg'nɪfɪkənt 'fɪgə/
sine rule
/saɪn ru:l/
sinusoidal model
/ˌsaɪnə'sɔɪdl 'mɒdl/
site
/saɪt/
slant height
/slænt haɪt/
slope field
/sləʊp fi:ld/
space diagonal
/speɪs daɪ'ægənl/
spanning tree

Spearman's rank
correlation coefficient
/'spɪəmənz ræŋk ˌkɒrɪ'leɪʃn ˌkəʊɪ'fɪʃənt/



## English

sphere
/sfɪə/
standard deviation
/'stændəd ˌdi:vɪ'eɪʃn/
standard form
/'stændəd fɔ:m/
stationary point
/'steɪʃənəri pɔɪnt/
steady state
/'stedi steɪt/
stretch
/stretʃ/
tangent
/'tændʒənt/
transformation matrix
/trænsfɔ:'meɪʃn 'meɪtrɪks/
transition matrix
/træn'sɪʃn 'meɪtrɪks/
travelling salesman
problem

tree
/tri:/
tree diagram
/tri: 'daɪəgræm/
two-tailed
/tu: teɪld/
type I error
/taɪp aɪ 'erə/
type II error
/taɪp 'tu: 'erə/
unbiased estimate

unit circle
/'ju:nɪt 'sɜ:kl/
unit vector
/'ju:nɪt 'vektə/
upper bound
/'ʌpə baʊnd/
use of mathematics

## English

valid

vector
/ˈvektə/
vector equation of a line

vector product
/ˈvektə ˈprɒdʌkt/
velocity
/vəˈlɒsɪti/
velocity vector

vertex
/ˈvɜːteks/
volume of revolution
/ˈvɒljuːm ɒv ˌrevəˈluːʃn/
Voronoi diagram

weighted graph
/ˈweɪtɪd græf/
zero
/ˈzɪərəʊ/