Number and algebra

International Baccalaureate · IB Diploma · Mathematics: Applications and Interpretation · HL · Vocabulary in context

Word	Example
sequence /'si:kwəns/	A **sequence** places its terms in a particular order.
arithmetic sequence /ˌærɪθ'metɪk 'si:kwəns/	2, 7, 12, 17 is an **arithmetic sequence**. 2, 7, 12, 17
common difference /'kɒmən 'dɪfrəns/	In the sequence 3, 7, 11, 15, the **common difference** is 4. 3, 7, 11, 15 4
series /'sɪəri:z/	A **series** is the sum of its terms.
geometric sequence /ˌdʒi:ə'metrɪk 'si:kwəns/	2, 6, 18, 54 is a **geometric sequence**. 2, 6, 18, 54
common ratio /'kɒmən 'reɪʃɪəʊ/	In the sequence 2, 6, 18, 54, the **common ratio** is 3. 2, 6, 18, 54 3
assumption /ə'sʌmpʃn/	The argument rests on one **assumption**: that all students have a phone.
compound interest /'kɒmpaʊnd 'ɪntrest/	**Compound interest** is paid on the interest too.
depreciation /dɪˌpri:ʃi'eɪʃn/	**Depreciation** spreads the cost of a machine over the years it is used.
inflation /ɪn'fleɪʃn/	**Inflation** means prices in general are rising.
amortised	A loan repaid in equal monthly payments is **amortised**.
annuity /ə'nju:ɪti/	An **annuity** pays the same amount every year for a set time.

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standard form /'stændəd fɔ:m/	3×10^4 is in **standard form**. 3×10^4
significant figure /sɪg'nɪfɪkənt 'fɪgə/	Round 4567 to one **significant figure**: 5000. 4567 5000
lower bound /'ləʊə baʊnd/	The **lower bound** of the array is 1. 1
upper bound /'ʌpə baʊnd/	The **upper bound** of the array is 10. 10
logarithm /'lɒgərɪθəm/	Take the **logarithm** of both sides.
natural logarithm /'nætʃərəl 'lɒgərɪθəm/	The **natural logarithm** ln x uses base e. ln x e
complex number /'kɒmpleks 'nʌmbə/	The **complex number** 4 + 3j has a real part of 4. 4 + 3j 4
Argand diagram /'ɑ:gænd 'daɪəgræm/	On an **Argand diagram**, a + bi is the point (a, b). a + bi (a, b)
modulus /'mɒdjʊləs/	The **modulus** of 4 + 3j is 5. 4 + 3j 5
argument /'ɑ:gju:mənt/	A positive real complex number has **argument** zero.
complex conjugate /'kɒmpleks 'kɒndʒu:geɪt/	The **complex conjugate** of 3 + 2i is 3 − 2i. 3 + 2i 3 − 2i
matrix /'meɪtrɪks/	Put each day's sales in one row of the **matrix**.
identity matrix /aɪ'dentɪti 'meɪtrɪks/	The **identity matrix** I has 1s on the diagonal and 0s elsewhere. I 1 0

Word	Example
determinant /dɪ'tɜːmɪnənt/	A nonzero **determinant** means a square matrix has an inverse.
inverse matrix /ɪn'vɜːs 'meɪtrɪks/	A matrix times its **inverse matrix** gives the identity matrix.
eigenvector /'aɪgənvektə/	The matrix scales an **eigenvector** without changing its line.
eigenvalue /'aɪgənvæljuː/	An **eigenvalue** of 1 shows a steady state of the Markov chain. 1
characteristic polynomial	The roots of the **characteristic polynomial** are the eigenvalues.
steady state /'stedi steɪt/	A drug reaches **steady state** after about five half-lives.

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