Further Pure Mathematics 2

Pearson Edexcel · International A-Level · Pure Mathematics · Vocabulary in context

Word	Example
method of differences /'meθəd ɒv 'dɪfrənsɪz/	The **method of differences** cancels most terms in a sum.
partial fractions /'pɑːʃl 'frækʃnz/	Use **partial fractions** to split $1/(x(x + 1))$ into $1/x - 1/(x + 1)$. $1/(x(x + 1))$ $1/x - 1/(x + 1)$
Euler's relation /'ɔɪləz rɪ'leɪʃn/	**Euler's relation** says $e^{\wedge}(i\theta) = \cos\theta + i\sin\theta$. $e^{\wedge}(i\theta) = \cos\theta + i\sin\theta$
de Moivre's theorem /də 'mɔɪvəz 'θɪərəm/	**de Moivre's theorem** says $(\cos\theta + i\sin\theta)^n = \cos n\theta + i\sin n\theta$. $(\cos\theta + i\sin\theta)^n = \cos n\theta + i\sin n\theta$
locus /'ləʊkəs/	The **locus** $\lvert z - 2\rvert = 3$ is a circle. $\lvert z - 2\rvert = 3$
perpendicular bisector /ˌpɜːpən'dɪkjʊlə baɪ'sektə/	Every point on the **perpendicular bisector** is the same distance from both ends.
Möbius transformation /'mɜːbɪəs trænsfɔː'meɪʃn/	A **Möbius transformation** maps z to $(az + b)/(cz + d)$. z $(az + b)/(cz + d)$
integrating factor /'ɪntɪgreɪtɪŋ 'fæktə/	Multiply by the **integrating factor** to solve the equation.
complementary function /ˌkɒmplɪ'mentəri 'fʌŋkʃn/	The **complementary function** solves the equation with zero on the right.
auxiliary equation /ɔːk'sɪlɪəri ɪ'kweɪʒn/	Solve the **auxiliary equation** to find the complementary function.
particular integral /pə'tɪkjʊlə 'ɪntɪgrəl/	The **particular integral** fits the right-hand side of the equation.

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Maclaurin series /mə'klɔːrɪn 'sɪəriːz/	The **Maclaurin series** for e^x is $1 + x + x^2/2! + \ldots$. e^x $1 + x + x^2/2! + \ldots$
Taylor series /'teɪlə 'sɪəriːz/	A **Taylor series** builds a function from its derivatives at one point.
polar coordinates /'pəʊlə kəʊ'ɔːdɪnəts/	Use **polar coordinates** to give position as distance and angle.
initial line /ɪ'nɪʃl laɪn/	Angles in polar coordinates are measured from the **initial line**.
cardioid /'kɑːdiɔɪd/	$r = 1 + \cos\theta$ draws a heart-shaped **cardioid**. $r = 1 + \cos\theta$
lemniscate /'lemnɪskeɪt/	A **lemniscate** looks like a figure eight. 8