Further Pure Mathematics 2

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

Word	Example
method of differences /ˈmeθəd ɒv ˈdɪfrənsɪz/	The **method of differences** cancels most terms in a sum.
partial fractions /ˈpɑːʃl ˈfrækʃnz/	Use **partial fractions** to split $1/(x(x+1))$ into $1/x - 1/(x+1)$. $1/(x(x+1)) \qquad 1/x - 1/(x+1)$
Euler's relation /ˈɔɪlər rɪˈleɪʃn/	**Euler's relation** says $e^{\widehat{}}(i\theta) = \cos\theta + i\sin\theta$. $e^{\widehat{}}(i\theta) = \cos\theta + i\sin\theta$
de Moivre's theorem /də ˈmɔɪvəz ˈθɪərəm/	**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 /ˈləʊkəs/	The **locus** $\lvert z-2\rvert = 3$ is a circle. $\lvert z-2\rvert = 3$
perpendicular bisector /ˌpɜːpənˈdɪkjʊlə baɪˈsektə/	Every point on the **perpendicular bisector** is the same distance from both ends.
Möbius transformation /ˈmɜːbɪəs trænsfɔːˈmeɪʃn/	A **Möbius transformation** maps z to $(az+b)/(cz+d)$. $z \qquad (az+b)/(cz+d)$
integrating factor /ˈɪntɪgreɪtɪŋ ˈfæktə/	Multiply by the **integrating factor** to solve the equation.
complementary function /ˌkɒmplɪˈmentəri ˈfʌŋkʃn/	The **complementary function** solves the equation with zero on the right.
auxiliary equation /ɔːkˈsɪlɪəri ɪˈkweɪʒn/	Solve the **auxiliary equation** to find the complementary function.
particular integral /pəˈtɪkjʊlə ˈɪntɪgrəl/	The **particular integral** fits the right-hand side of the equation.

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Maclaurin series /məˈklɔːrɪn ˈsɪəriːz/	The **Maclaurin series** for e^x is $1 + x + x^2/2! + \ldots$. $e^x \qquad 1 + x + x^2/2! + \ldots$
Taylor series /ˈteɪlə ˈsɪəriːz/	A **Taylor series** builds a function from its derivatives at one point.
polar coordinates /ˈpəʊlə kəʊˈɔːdɪnəts/	Use **polar coordinates** to give position as distance and angle.
initial line /ɪˈnɪʃl laɪn/	Angles in polar coordinates are measured from the **initial line**.
cardioid /ˈkɑːdiɔɪd/	$r = 1 + \cos\theta$ draws a heart-shaped **cardioid**. $r = 1 + \cos\theta$
lemniscate /ˈlemnɪskeɪt/	A **lemniscate** looks like a figure eight. 8