Sequences, functions and graphs

Pearson Edexcel · International GCSE · Mathematics A · Vocabulary in context

Word	Example
→ **term-to-term rule** /tɜːm tə tɜːm ruːl/	The **term-to-term rule** is “add 3”. “ 3”
position-to-term rule /pəˈzɪʃn tə tɜːm ruːl/	A **position-to-term rule** gives a term directly from its position.
+ **arithmetic sequence** /əˈrɪθmətɪk ˈsiːkwəns/	2, 7, 12, 17 is an **arithmetic sequence**. 2, 7, 12, 17
− **common difference** /ˈkɒmən ˈdɪfrəns/	In the sequence 3, 7, 11, 15, the **common difference** is 4. 3, 7, 11, 15 4
Σ **sum of an arithmetic series** /sʌm əvən əˈrɪθmətɪk ˈsɪəriːz/	Pairing the end terms helps find the **sum of an arithmetic series**.
function /ˈfʌŋkʃn/	A **function** returns a value.
domain /dəˈmeɪn/	Leave zero out of the **domain** when x is on the bottom of a fraction. x
range /reɪndʒ/	The **range** of $f(x) = x^2$ is all values greater than or equal to zero. $f(x) = x^2$
composite function /ˈkɒmpəzɪt ˈfʌŋkʃn/	A **composite function** fg(x) means f(g(x)): apply g first. fg(x) f(g(x)) g
inverse function /ɪnˈvɜːs ˈfʌŋkʃn/	The **inverse function** undoes the original function.
• **midpoint** /ˈmɪdpɔɪnt/	The **midpoint** of (0, 0) and (4, 6) is (2, 3). (0, 0) (4, 6) (2, 3)

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gradient /ˈgreɪdɪənt/	The **gradient** of a distance-time graph gives the speed.
parallel lines /ˈpærəlel laɪnz/	Distinct **parallel lines** keep the same direction and never meet.
perpendicular lines /ˌpɜːpənˈdɪkjʊlə laɪnz/	**Perpendicular lines** meet at a right angle.
transformation /trænsfɔːˈmeɪʃn/	This **transformation** moves the graph three units up.
rate of change /reɪt ɒv tʃeɪndʒ/	The **rate of change** is 5 metres per second. 5 metres per second
differentiation /ˌdɪfəˌrenʃɪˈeɪʃn/	**Differentiation** finds the derivative of a function.
stationary point /ˈsteɪʃənəri pɔɪnt/	The tangent is horizontal at a **stationary point**.
maximum /ˈmæksɪməm/	A **maximum** point is the top of a hill on the graph.
minimum /ˈmɪnɪməm/	A **minimum** point is the bottom of a valley.

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