G · Differentiation

AQA · A-Level · Mathematics · Vocabulary in context

Word	Example
differentiation /ˌdɪfəˌrenʃɪ'eɪʃn/	**Differentiation** finds how a function changes at each input.
derivative /dɪ'rɪvətɪv/	Use the **derivative** to find the curve's slope at this point.
normal /'nɔːml/	The **normal** is a line at 90° to the surface. 90°
stationary point /'steɪʃənəri pɔɪnt/	The tangent is horizontal at a **stationary point**.
second derivative /'sekənd dɪ'rɪvətɪv/	The **second derivative** tells us how the gradient changes.
local maximum /'ləʊkl 'mæksɪməm/	At a **local maximum**, the gradient is zero and the second derivative is negative.
local minimum /'ləʊkl 'mɪnɪməm/	At a **local minimum**, the gradient is zero and the second derivative is positive.
convex /kɒn'veks/	A curve is **convex** where it bends upwards, like a cup.
concave /kɒn'keɪv/	A curve is **concave** where it bends downwards, like a hill.
point of inflection /pɔɪnt ɒv ɪn'flekʃn/	At a **point of inflection**, the curve changes from bending one way to the other.
connected rates of change /kə'nektɪd reɪts ɒv tʃeɪndʒ/	**Connected rates of change** use the chain rule, such as how fast a balloon's radius grows.

exercises.lol exercises.com.cn

Word	Example
differential equation /ˌdɪfəˈrenʃl ɪˈkweɪʒn/	A **differential equation** links a quantity and its rate of change.

exercises.lol exercises.com.cn