Guide to:
Gradient of a line

maths Links

Explanation:

The **gradient (m)** of a straight line measures how steep it is: **Gradient = $\frac{\text{Change in y}}{\text{Change in x}} = \frac{y_2 - y_1}{x_2 - x_1}$.**

Lines sloping **upwards** from left to right have a **positive** gradient; lines sloping **downwards** from left to right have a **negative** gradient; horizontal lines have gradient **0**. Always subtract the coordinates in the same order on top and bottom.

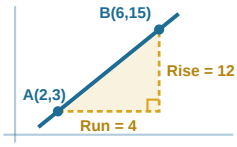
Example 1: Find the gradient of the line passing through **A(2, 3)** and **B(6, 15)**.

Solution:

Use $m = \frac{y_2 - y_1}{x_2 - x_1}$:

$m = \frac{15 - 3}{6 - 2} = \frac{12}{4} = \mathbf{3}$

Answer: Gradient = 3



Example 2: Work out the gradient of the line joining **P(−3, 7)** and **Q(5, 3)**.

Solution:

$m = \frac{3 - 7}{5 - (-3)} = \frac{-4}{8}$

Simplify the fraction: $m = -\frac{1}{2}$ (or −0.5)

Answer: Gradient = $-\frac{1}{2}$

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Corbettmaths (Textbook)	Qs	Ans	**PMT (IGCSE)**	Qs	Ans
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