Guide to:
Real life graphs

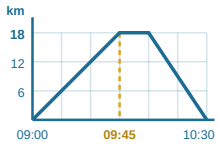
maths Links

Explanation:

On a **distance–time graph**, a sloping straight line represents constant speed, a **horizontal flat line** means the object is **stationary (stopped)**, and the **gradient equals the speed** ($\frac{\text{Distance}}{\text{Time}}$). Always check the time scale on the horizontal axis (e.g. 15 mins = 0.25 hours).

On a **cost or conversion graph** (such as taxi fares or utility bills), the ***y*-intercept** is the fixed standing charge, and the **gradient** ($\frac{\text{Change in } y}{\text{Change in } x}$) is the rate per unit (e.g. cost per mile).

Example 1: A cyclist leaves at **09:00**, travels **18 km** by **09:45**, rests **15 mins**, then cycles **18 km** home by **10:30**. Find Stage 1 speed in **km/h**.

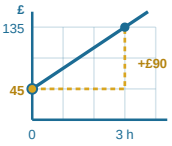


Dist = **18 km**

45 min = **0.75 h**

Speed = $\frac{18}{0.75}$ = **24 km/h**

Example 2: A plumber's graph goes from **(0, 45)** through **(3, 135)** for hours x and cost y (£). Find the call-out fee and hourly rate.



Fee (0 hrs) = **£45**

Rate = $\frac{135 - 45}{3}$ = **£30/h**

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Maths Genie	Qs	Ans	**E Classroom**	Qs	Ans
Corbettmaths (Practice)	Qs	Ans	**PMT (Edexcel)**	Qs	Ans
Corbettmaths (Textbook)	Qs	Ans	**PMT (AQA)**	Qs	Ans
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