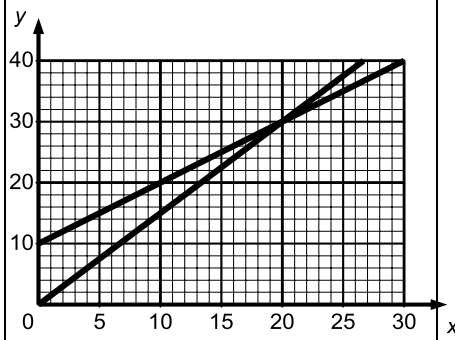
APPLICATION OF GRAPH - GCSE EDEXCEL (Higher)

Marking Schem

1MA0_1H

Question		Working	Answer	Mark	Notes
1	(a)		10	1	B1 cao
	(b)		Ed is cheaper up to 20 miles, Bill is cheaper for more than 20 miles	3	M1 for correct line for Ed intersecting at (20,30) ±1 sq tolerance **or** $10 + x = 1.5x$ oe C2 (dep on M1) for a correct full statement ft from graph eg. Ed cheaper up to 20 miles **and** Bill cheaper for more than 20 miles (C1 (dep on M1) for a correct conclusion ft from graph eg. cheaper at 10 miles with Ed ; eg. cheaper at 50 miles with Bill eg. same cost at 20 miles; eg for £5 go further with Bill **OR** A general statement covering short **and** long distances eg. Ed is cheaper for shorter distances **and** Bill is cheaper for long distances) **OR** M1 for correct method to work out Ed's delivery cost for at least 2 values of n miles where $0 < n \leq 50$ **OR** for correct method to work out Ed and Bill's delivery cost for n miles where $0 < n \leq 50$ C2 (dep on M1) for 20 miles linked with £30 for Ed and Bill with correct full statement eg. Ed cheaper up to 20 miles **and** Bill cheaper for more than 20 miles (C1 (dep on M1) for a correct conclusion eg. cheaper at 10 miles with Ed; eg. cheaper at 50 miles with Bill eg. same cost at 20 miles; eg for £5 go further with Bill **OR** A general statement covering short **and** long distances eg. Ed is cheaper for shorter distances **and** Bill is cheaper for long distances) SC : B1 for correct full statement seen with no working eg. Ed cheaper up to 20 miles **and** Bill cheaper for more than 20 miles QWC: Decision and justification should be clear with working clearly presented and attributable

Miles	0	10	20	30	40	50
Ed	0	15	30	45	60	75
Bill	10	20	30	40	50	60

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Question		**Working**	**Answer**	**Mark**	**Notes**
2 **QWC**		$\frac{30}{24} \times 60 = 75$	Debbie + explanation	4	M1 for reading 24 (mins) and 30 (km) or a pair of other values for Debbie M1 for correct method to calculate speed eg. 30 ÷ 24 oe A1 for 74 – 76 or for 1.2 – 1.3 and 1.1 C1 (dep on M2) for correct conclusion, eg Debbie is fastest from comparison of "74 – 76" with 66 (kph) or "1.2 – 1.3" and 1.1 (km per minute) **OR** M1 for using an appropriate pair of values for Ian's speed eg 66 and 60, 33 and 30, 11 and 10 M1 for pair of values plotted on graph A1 for correct line drawn C1 (dep on M2) for Debbie is fastest from comparison of gradients. **OR** M1 for reading 24 (mins) and 30 (km) or a pair other values for Debbie M1 for Ian's time for same distance or Ian's distance for same time. A1 for a pair of comparable values. C1 (dep on M2) for Debbie is fastest from comparison of comparable values.

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Question		**Working**	**Answer**	**Mark**	**Notes**
3	(a)		Relationship	1	B1 for a description of a dynamic relationship eg "The older the car the lower the price" or "The newer the car the greater the price" oe (accept negative correlation)
	(b)		6400 to 7000	2	M1 for a single straight line segment with negative gradient that could be used as a line of best fit or vert. line from 3.5 or a point plotted at (3.5, *y*), where *y* is in the range 6400 to 7000 A1 for 6400 - 7000