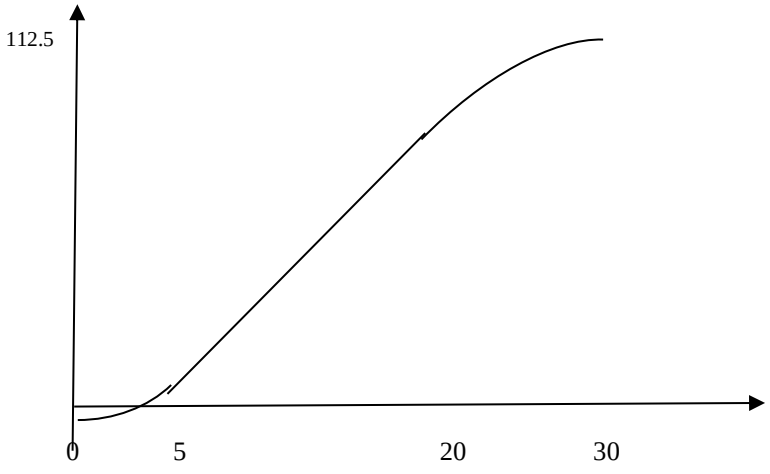
Question	Scheme	Marks	AOs
1(a)	Complete method to find *AB*	M1	3.1b
	$= (\frac{1}{2} \times 5 \times 5) + (5 \times 15) + (\frac{1}{2} \times 5 \times 10)$ or $= \frac{1}{2}(30+15) \times 5$ or $= (\frac{1}{2} \times 5 \times 5) + \frac{1}{2}(25+15) \times 5$ or $= \frac{1}{2}(20+15) \times 5 + (\frac{1}{2} \times 5 \times 10)$ or $= (30 \times 5) - (\frac{1}{2} \times 5 \times 5) - (\frac{1}{2} \times 5 \times 10)$	A1	1.1b
	$= 112.5\,(\text{m})$	A1	1.1b
		(3)	
(b)		B1 B1 B1	1.1b 1.1b 1.1b
		(3)	
			(6 marks)

Notes:

(a)	
M1	Complete method to find the total area under the graph, with the correct structure triangle + rectangle + triangle or trapezium or triangle + trapezium or trapezium + triangle or rectangle – triangle – triangle **N.B.** They may use *suvat* on one or more of the sections.
A1	Correct unsimplified expression for the distance *AB*

A1	Accept 110 or better
(b)	**SC**: If there is a single straight line with a positive gradient, allow B1B0B0, unless it's absolutely clear that it is for the first section only. If there are just two straight lines, both with positive gradient, allow B1B0B0.
B1	One section correct. Straight section should be straight with positive gradient..Curves should look like curves with first one having increasing gradient and second one decreasing gradient but staying non-negative.
B1	Two sections correct. Straight section should be straight with positive gradient Curves should look like curves with first one having increasing gradient and second one decreasing gradient but staying non-negative. Continuous graph but condone incorrect transition between sections.
B1	All three sections correct and 5, 20, 30 and **their** 112.5 shown. Straight section should be straight with positive gradient. Curves should look like curves with first one having increasing gradient and second one decreasing gradient but staying non-negative. Continuous graph but condone incorrect transition between sections.
	N.B. Subtract 1 mark from any earned if there is a continuous vertical line at the end. Ignore any figs when awarding the first two B marks except for the **SC** mentioned above.