## Dist Speed Time 1 Answers

1)	<b>(a)</b> 1.05	2	<b>M1</b> clear attempt at <i>y</i> -step/ <i>x</i> -step
	<b>(b)</b> 3360	3	M1 attempting the area under the graph W1 $\frac{(140+180) \times 21}{2}$ May be done by triangles and rectangles
	(c) 18.7	1ft	(b) / 180 evaluated correctly

2)

(a) 0.8 or 4/5 cao	2	M1 speed/time			
<b>(b)</b> 960 www	3	M1 $30 \times (12 + 36)/2$ M1 $12 \times 40$ M1 $10 \times (12 + 36)/2$ M1 $\frac{1}{2} \times 40 \times 24$			

3)

16 $\frac{1}{4}$ or 16.3 5	M1 finding the area under graph A1 130 M1 $\frac{1}{2} \times 16 \times v$ M1 equating and solving
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4)

<b>(a)</b> 6, 30, 70	2	B1 for 2 correct
(b) graph	3	<ul><li>P2 7 plots correct from table</li><li>P1 5 or 6 plots correct from table</li><li>C1 smooth curve through the points in the given range within one small square of the plots or the correct position</li></ul>
(c) 82.5 or ft $\pm 1$	1 <b>ft</b>	
( <b>d</b> ) 108 or ft ±1	1 <b>ft</b>	

5)

	70	2	<b>M1</b> for $252 \times 1000 \div 60 \div 60$ oe
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6)

(a) $\frac{3}{4}$ or 0.75	1	M1 for finding the area under the graph or
(b) 2.6	3	M1 for their 39 ÷ 15

7)

(a) (0)8(.)01 (am)	1	Not 8.01pm
<b>(b)</b> 78.4 or 78.38 to 78.39	3	M2 for 827 ÷ 10.55 or M1 for figs 827 ÷ their time

8) -	<b>(a)</b> 480	)	1		· · · · · · · · · · · · · · · · · · ·
	<b>(b)</b> 990	3	M1 for attempt at area under graph M1 for $0.5 \times 15 \times$ (their (a) + 14 × 60) oe or $0.5 \times 15 \times (8 + 14)$ oe		
	(c) 0.12	2	<b>M1</b> for numerical vertical/horizontal or numerical use of $v = u + at$ but $t \le 120$ or $t \le 2$		
				1	
9)	(a)	159		3	M1 evidence of using area under graph M1 stating area correctly
	(b) (i)	50		2	<b>M1</b> 3 × (1000/60) oe
	(ii)	0.208		2	<b>M1</b> evidence of numerical rise/run or use of $(v - u)/t$