

## Dist Speed Time 2 Answers

1)	(a)	0.8	1	
	(b)	1850	4	M1 for area = distance travelled M1 for two correct area statements M1 for complete correct area statement
2)	(a)	50	1	
	(b)	15	2	M1 finding area under graph SC1 15000
3)		6(.00) www	4	M1 use of area = distance M1 complete, correct set of area statements, ignoring units M1 changing min to hours or km/h to km/min
4)	(a) (i)	[0]5 38 oe	1	Allow 5h 38 but not 5h 38mins
	(ii)	92.7 [92.72 to 92.73] oe	2	Allow $92\frac{8}{11}$ or $\frac{1020}{11}$ M1 for $850 \div$ their 9 h 10 min in hours oe Allow $850 \div 9.1$ for M1
5)	(i)	$9\frac{5}{12}$ or $\frac{108+5}{12}$ or $\frac{9 \times 12 + 5}{12}$ or $\frac{565}{60}$ or $\frac{9 \times 60 + 25}{60}$ seen	E1	Must be fractional form Condone $113/12 \times 60 = 565$ ; $9 \times 60 + 25 = 565$ Not for decimals
	(ii)	$\frac{3y+2}{3}$ or $\frac{y+4}{2}$ o.e. $\frac{2(3y+2)}{6} + \frac{3(y+4)}{6}$ o.e.	B1 B1	 or $\frac{6y+4}{6} + \frac{3y+12}{6}$ o.e.
	iii)	$\frac{2(9y+16)}{12} = \frac{113}{12}$ o.e. y = 4.5 c.a.o. www2	M1 A1	o.e. means with common denominator or better (Trial and error scores 2 or 0.)
	iv)	(Total dist =) $(3 \times \text{their } y) + 2 + (\text{their } y) + 4$ o.e. (Average speed =) $\frac{\text{their } 24}{9\frac{5}{12}}$ o.e. 2.55 (km/h) (2.548 – 2.549) c.a.o. www 3	M1 M1 A1	(= 24)  (dependent) Must be km divided by hours o.e. for full method Accept fractions in range

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6)	(a) (i) Tangent	1	Correct tangent drawn
	(ii) 4.4 to 6	2	dep <b>M1</b> attempting to find gradient of their tangent
	(b) 780	2	<b>M1</b> evidence of finding the area under the graph ONLY from $t = 12$ to $t = 25$
7)	(a) 2	1	
	(b) 6.7 to 7.3	1	
	(c) 203	3	<b>M1</b> intention to find area under the graph <b>M1</b> $\frac{1}{2} \times 7 \times 14 + 9 \times 14 + \frac{1}{2} \times 4 \times 14$ oe
8)	(b) 22 35 or 10 35 pm	2	Accept 22 35 pm <b>B1</b> for 15 35 or 3 35 pm seen or answers 22h 35 mins or (0)8 35(am) or 10 35(am)
	(c) 8710 $\div$ 800	M1	
	10.88 to 10.9 with no conversion to h/min	A1	Implied by correct final ans 2hrs 52 mins if not shown
	or 10 (hrs) 52 (mins) to 10 (hrs) 54 (mins) oe		
	13 hrs 45 mins – their time in hrs and mins oe	M1	Dep on first <b>M1</b> e.g. 13 hrs 45mins – 11 hrs 29 mins or 13.75 – 10.9 then 2hrs 51 mins
	or 13.75 – their decimal time <b>and</b> a correct conversion to hrs and mins or minutes		
	2 hr 52 mins    cao	A1	www4 (2 hrs 51.75 mins)