

Question	Answer	Marks	AO Element	Notes	Guidance
1	107	1			
2(a)	Measurement of PQ correctly scaled to km	2		M1 for correct measurement of PQ in cm seen or for <i>their</i> measurement [in cm] multiplied by 4	
2(b)	065	1			
2(c)	X correctly placed 7 cm from P on a bearing of 140°	2		M1 for X on bearing of 140° from P or for X 7 cm from P If 0 scored, SC1 for X on bearing of 140° from Q and 7 cm from Q	
3(a)	247	1			
3(b)	Point C correctly plotted	3		B2 for line from B 8.3 cm to 8.7 cm long or M1 for $102 \div 12$ and B1 for bearing 155° to 159°	
4(a)	M marked correctly	2		B1 for correct bearing B1 for correct distance	

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4(b)	132	2		M1 for $312 - 180$ or $180 - 48$	
5	1.8432	2		M1 for $\frac{32 \times 24\,000 \times 24\,000}{100\,000 \times 100\,000}$ oe If 0 scored, SC1 for figs 184[32]... as answer	
6(a)	<i>J</i> marked in correct position	2		M1 for bearing 036 from <i>K</i> or bearing 284 drawn from <i>L</i>	
6(b)	12 23	3		M1 for $\frac{9.6}{4.5}$ oe or B1 for figs 213 or 2133... A1 for 2h 8min If A0 scored, SC1 for 10 15 + their time correctly evaluated	
7	Circle with 3.8 cm radius drawn	2		M1 for $11.4 \div 1.5$ or $5.7 \div 1.5$	

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8	49 000	3		M1 for $4.9 \times (10\,000\,000)^2$ M1 for $\div (100\,000)^2$ OR M1 for 1 cm : 100 km M1 for $4.9 \times (\textit{their } 100)^2$ OR M2 for $\left(\frac{\sqrt{4.9} \times 10\,000\,000}{100\,000} \right)^2$ or M1 for $\frac{\sqrt{4.9} \times 10\,000\,000}{100\,000}$	
9	2.1	2		M1 for $\frac{33.6 \times 25000^2}{100000^2}$ oe or answer figs 21	
10(a)	322	1			
10(b)	800 000	1			
10(c)	Ruled line <i>CX</i> drawn on map	1			

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10(d)	11 27	1			
11(a)	Correct position of town <i>B</i>	2		B1 for correct bearing B1 for correct distance	
11(b)(i)	Correct triangle drawn	3		B2 for correct triangle with no or wrong arcs or correct position of <i>C</i> with arcs (no triangle) or B1 for one line correct length drawn or 7 and 5 seen	
11(b)(ii)	38 to 42	1		FT <i>their</i> measured angle at <i>C</i>	
12	[0]64[°]	1			
					[Total: 39]