1	100 ÷ 28 440 (= 0.0035…) **or** 28 440 ÷ (60 × 60) (= 7.9)		3	M1	
	'0.0035...' × 60 × 60 **or** 100 ÷ '7.9'			M1	
		13		A1	for 12.65 – 13
					Total 3 marks

2	a		3000	1	B1
	b		6.5	1	B1
					Total 2 marks

3	(a)(i)		kilometres	1	B1 accept m
	(ii)		grams	1	B1 accept g or grammes
	(iii)		square metres	1	B1 accept m^2
	(b)	× 1000 (= 1000)	÷ 1000 (= 0.03)	3	M1
		÷ 30 (= 33.3…)	÷ '0.03' (= 33.3…)		M1
			33		A1 SC B2 for 33.3……. or 34
					Total 6 marks

4	32.4×100^3		2	M1	for 32.4×100^3 oe
		32 400 000		A1	for 32 400 000 accept 3.24×10^7
					Total 2 marks

5	50×60 (= 3000) or $50 \div 1000$ (= 0.05 or $\frac{1}{20}$) or $50 \times 60 \times 60$ (= 180 000) or or $\frac{60 \times 60}{1000}$ (= 3.6) or $1000 \div 60 \div 60$ (= 0.27777…. or $\frac{5}{18}$)		3	M1	for 50 with at least one of ÷ 1000 or × 60 or $\frac{60 \times 60}{1000}$ (= 3.6) or $1000 \div 60 \div 60$
	$50 \times \frac{60 \times 60}{1000}$ oe eg $50 \div \frac{5}{18}$			M1	(dep) for a complete method
		180		A1	for 180 (SCB1 for both conversion factors correct but applying them wrongly eg $\frac{50 \times 1000}{60 \times 60}$)
					Total 3 marks

6	b		1 000 000	1	B1 or $(1 \times) 10^6$ or (one or 1) million oe

7	(d)		centimetres	1	B1 or cm

8	×1000 (÷60 ÷ 60) or ÷3600 or sight of 81 000 or 1350 or 0.0225		3	M1	For one of ×1000 (eg sight of 81 000) or (÷60 ÷ 60) or ÷3600 oe
	$\frac{81 \times 1000}{60 \times 60}$ oe eg $\frac{81}{3.6}$ or $81 \times \frac{5}{18}$ oe			M1	For a fully correct method with correct use of brackets eg 81000 ÷ 60 × 60 is M1 only if not recovered
		22.5		A1	oe eg $\frac{45}{2}$
					Total 3 marks

9	(a)		600	1	B1
	(b)		4.5	1	B1
	(c)	3 × 1000 (= 3000) **or** 225 ÷ 1000 (= 0.225)		4	M1
		"3000" ÷ 225 (= 13.3...) oe **or** 3 ÷ 0.225 (= 13.3...) oe			M1
		"3000" – ("13" × 225) **or** [3 – (13 × "0.225")] × 1000			M1 for a complete method
			75		A1
					Total 6 marks

10	$220 \div 80$ (= 2.75 or $\frac{11}{4}$) oe			M1 for a method to find the time from B to C
	$72 \times \frac{50}{60}$ (= 60) oe			M1 for a method to find the distance from C to D Allow 0.83(333…) to 2 dp truncated or rounded
	$\frac{245+220+"60"}{2.5+"2.75"+\frac{50}{60}}\left(=\frac{525}{73\frac{1}{2}}\right)$ oe			M1 for a complete method to find the average speed for entire journey 0.83(333…) to 2 dp truncated or rounded 6.0(8333…) to 2 sf truncated or rounded
		86.3		A1 for 86.3 – 86.4
				Total 4 marks

11	2 m written as 200 cm or 35 cm written as 0.35 m		3	B1	made be seen in workings
	"200" ÷ 35 **or** 2 ÷ "0.35" (= $\frac{40}{7}$ or 5.714...) **or** indication of 175 (cm) or 1.75 (m)			M1	**or** clearly adding on 35 or 0.35 at least 5 times with no more than one error **or** clearly subtracting 35 or 0.35 at least 5 times from 200 or 2 with no more than one error ft incorrect conversion but attempt must have been made to convert
		25		A1	
					Total 3 marks

12	3 hours 15 mins = 3.25 (hours) or $3\frac{1}{4}$ (hours) or $3\frac{15}{60}$ (hours) or 195 (mins)		3	B1	For converting 3 hrs 15 minutes into hours or minutes
	$18.2 \div "3\frac{1}{4}"$ oe **or** $18.2 \div "195" \times 60$			M1	For use of D ÷ T allow 18.2 ÷ 3.15 or their incorrect time conversion (must be clear that this is their time conversion) If B mark awarded then the value that gained that mark must be used here to gain this method mark.
		5.6		A1	oe
					Total 3 marks

13 (d)		360	1	B1	

14	90×1000 (= 90 000) or $\frac{90}{60\times60}$ (= 0.025 or $\frac{1}{40}$) or $\frac{1000}{60\times60}$ (= $\frac{5}{18}$ = 0.277...) or sight of 1500		3	M1	For one of ×1000 (eg sight of 90 000) or (÷60 ÷ 60) or ÷3600 oe ie correct conversion of distance units or of time units	M2 for $90 \div 3.6$ **or** $90 \times \frac{5}{18}$
	$\frac{90\times1000}{60\times60}$ oe eg $(1.5\times1000)\div60$			M1	For a fully correct method with correct use of brackets eg 90 000 ÷ 60 × 60 is M1 only if not recovered	
	Working required	25		A1	dep on M1	
						Total 3 marks

15	$\frac{1}{2}(330+170)\times 240$ (= 60 000) oe or $\left(\frac{80\times 240}{2}\right)+(170\times 240)+\left(\frac{80\times 240}{2}\right)$ (= 60 000) oe or (2 × 9600) + 40 800 (= 60 000) oe		4	M1 for working out the area of the trapezium
	[60 000] ÷ 10 000 (= 6) or 10 000 × 6 (= 60 000)			M1 ft their area (must come from a two dimensional area) Allow $\frac{\text{their area}}{10\,000}$
	49 650 ÷ [6]			M1 dep on either previous M1 ft their number of hectares Allow $\frac{49\,650}{\text{their number of hectares}}$
	Correct answer scores full marks (unless from obvious incorrect working)	8275		A1
				Total 4 marks

16	For 27 ×1000 (= 27 000) **or** $\frac{27}{60\times 60}$ (= 0.0075 or $\frac{3}{400}$) **or** $\frac{1000}{60\times 60}$ ($\frac{5}{18}$ = 0.27(7...)) **or** sight of 450		3	M1	For one of ×1000 (eg sight of 27 000) or (÷60 ÷60) or ÷3600 oe ie correct conversion of distance units or of time units or $\frac{1000}{60\times 60}$	M2 for 27 ÷ 3.6 **or** $27\times\frac{5}{18}$
	$\frac{27\times 1000}{60\times 60}$ oe (0.45 ×1000) ÷ 60 **or** 0.27…. × 27			M1	For a fully correct method with correct use of brackets eg 27 000 ÷ 60 × 60 is M1 only if not recovered	
	Correct answer scores full marks (unless from obvious incorrect working)	7.5		A1	$\frac{15}{2}$ or $7\frac{1}{2}$ oe	
						Total 3 marks