Q	Answer	Mark	Comments
1	$11.2 \div 8 \times 5$ or 1.4 seen or 1.6 seen or 0.625 seen	M1	oe full method oe eg $\frac{7}{5}$ oe eg $\frac{8}{5}$ oe eg $\frac{5}{8}$
	7	A1	
	Additional Guidance		
	Build up methods may score for seeing the correct scale factor ie 1.6 or 0.625 but otherwise need a fully correct method for the first mark		
	Build up methods that do not reach exactly 7 but are then rounded to 7 will score M1 max for seeing 1.4, 1.6 or 0.625		
	M1 may be awarded for correct work, with no or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comments
2	**Alternative method 1**		
	198 × 0.45 or 89.1	M1	
	their 89.1 ÷ 6.25	M1	their 89.1 must come from a division or multiplication using 198 and 0.45 only
	14.256 or 14.26 or 14.3	A1	SC1 556.875 or 556.88 or 556.9 or 70.4
	Alternative method 2		
	198 ÷ 6.25 or 31.68	M1	
	their 31.68 × 0.45	M1	their 31.68 must come from a division or multiplication using 198 and 6.25 only
	14.256 or 14.26 or 14.3	A1	SC1 556.875 or 556.88 or 556.9 or 70.4
	Alternative method 3		
	0.45 ÷ 6.25 or 0.072	M1	
	198 × their 0.072	M1dep	
	14.256 or 14.26 or 14.3	A1	SC1 556.875 or 556.88 or 556.9 or 70.4
	Alternative method 4		
	6.25 ÷ 0.45 or $13.\dot{8}$ or 13.8(…) or 13.9	M1	
	198 ÷ their $13.\dot{8}$	M1dep	
	14.256 or 14.26 or 14.3	A1	SC1 556.875 or 556.88 or 556.9 or 70.4

2 cont	Additional Guidance	
	198 × 0.45 ÷ 6.25 oe	M1M1
	198 × 0.45 × 6.25 (which gives 556.875)	M1M0
	198 ÷ 0.45 ÷ 6.25 (which gives 70.4)	M0M1
	198 ÷ 0.45 × 6.25 (which gives 2750)	M0M0
	Do not allow 6.25^2 for 6.25 eg 198 ÷ 6.25 ÷ 6.25	M0
	Ignore rounding or truncation after correct answer seen	

Q	Answer	Mark	Comments
3	**Alternative method 1 – compares speeds in m/s**		
	200 ÷ 24 or 8.3(3…)	M1	oe eg $\frac{200}{24}$ or $8\frac{1}{3}$
	28.8 × 1000 ÷ 60 ÷ 60 or 8	M1	oe eg 28 800 ÷ 3600 or 28.8 ÷ 3.6
	8 and 8.3(3…) and Tom	A1	oe eg 8 and $8\frac{1}{3}$ and Tom
	Alternative method 2 – compares speeds in km/h		
	200 ÷ 24 or 8.3(3…)	M1	oe eg $\frac{200}{24}$ or $8\frac{1}{3}$
	their 8.3(3…) ÷ 1000 × 60 × 60 or 30	M1dep	oe eg 0.008 3(3…) × 3600
	30 and Tom	A1	
	Alternative method 3 – time for Adil starting with m/s		
	28.8 × 1000 ÷ 60 ÷ 60 or 8	M1	oe eg 28 800 ÷ 3600
	200 ÷ their 8 or 25	M1dep	oe eg $\frac{200}{8}$
	25 and Tom	A1	oe eg Tom by 1s
	Alternative method 4 – time for Adil starting with km/h		
	$\frac{200 \div 1000}{28.8}$ or [0.0069, 0.007] or $\frac{200}{28.8}$ or [6.9, 7]	M1	oe eg $\frac{0.2}{28.8}$ eg $\frac{125}{18}$
	their [0.0069, 0.007] × 60 × 60 or their [6.9, 7] ÷ 1000 × 60 × 60 or 25	M1dep	oe eg $\frac{0.2}{28.8} \times 3600$
	25 and Tom	A1	oe eg Tom by 1s

Q	Answer	Mark	Comments
3 cont	**Alternative method 5 – distance for Adil in 24s**		
	28 800 × 24 or 691 200 or 28.8 ÷ 60 ÷ 60 or 0.008 or 28.8 × 24 or 691.2	M1	oe eg $\frac{3456}{5}$
	their 691 200 ÷ 60 ÷ 60 or their 0.008 × 1000 × 24 or their 691.2 × 1000 ÷ 60 ÷ 60 or 192	M1dep	oe eg 28 800 × 24 ÷ 3600
	192 and Tom	A1	
	Additional Guidance		
	Up to M2 may be awarded for correct work, with no or incorrect answer, even if this is seen amongst multiple attempts		
	Ignore all units		
	Allow other correct comparisons eg 500 and 480 (this is metres per minute) eg 500 and 480 and Tom		M1M1 M1M1A1
	200 m = 0.2 km, 24 s = 24 ÷ 60 ÷ 60 = $\frac{1}{150}$ hour, 0.2 ÷ $\frac{1}{150}$ = 30 and Tom		M1M1A1
	$\frac{200 \div 1000}{24} = \frac{1}{120}$ (or 0.0083…)		M1

Q	Answer	Mark	Comments
4	4.5 × 7 or 45 × 7 or digits 315	M1	oe
	31.5(0) or $31\frac{1}{2}$	A1	

Q	Answer	Mark	Comments
5(a)	27 ÷ 1.2 or 22.5	M1	oe eg 27 × 0.83(3…)
	22.50	A1	
	Additional Guidance		
	M1 may be awarded for correct work, with no or incorrect answer, even if this is seen amongst multiple attempts		
	Condone (£)22.50p		
	22.50 in working with answer 22.5		M1A1
	22.5(0) in working with answer 22 or 23		M1A0
	Answer of 22 or 23 with no working		M0A0
	22.5(0) × 1.2 = 27		M1A0
	Build up must be a fully correct method		

Q	Answer	Mark	Comments
5(b)	7.5		B2 168 ÷ 8 × 5 ÷ 14 oe or 168 ÷ 8 × 5 oe or 105 or 168 × 5 ÷ 14 oe or 60 or 168 ÷ 8 ÷ 14 oe or 1.5 or 14 ÷ 5 × 8 oe or 22.4
		B3	B1 168 ÷ 8 or 21 or 168 × 5 or 840 or 168 ÷ 14 or 12 or 14 ÷ 5 or 2.8 or 14 × 8 or 112 or 8 ÷ 5 or 1.6 or 5 ÷ 8 or 0.625
	Additional Guidance		
	Up to B2 may be awarded for correct work, with no or incorrect answer, even if this is seen amongst multiple attempts		
	7.5 in working with answer 7 or 8		B3
	21 × 5		B2
	840 ÷ 14		B2
	21 ÷ 14		B2
	2.8 × 8		B2

Q	Answer	Mark	Comments
6(a)	200	B1	accept two hundred

Q	Answer	Mark	Comments
6(b)	8000	B1	accept eight thousand

Q	Answer	Mark	Comments
6(c)	24 ÷ 8 or 3 or 5 ÷ 8 or 0.625 or 8 ÷ 5 or 1.6 or 24 × 5 or 120 or 24 ÷ 8 × 5 or 24 : 15	M1	oe eg $\frac{5}{8} \times 24$
	15	A1	
	Additional Guidance		
	8 – 5 = 3		M0

Q	Answer	Mark	Comments
7	**Alternative method 1: population density of Town A**		
	84 000 ÷ (7 × 2.6) or [4615, 4616]	M2	oe M1 84 000 ÷ 7 or 12 000 oe or 7 × 2.6 or 18.2 oe
	Town B and [4615, 4616]	A1	
	Alternative method 2: comparing one square mile of population		
	84 000 ÷ 7 or 12 000	M1	oe
	4695 × 2.6 or 12 207	M1	oe
	Town B and 12 000 and 12 207	A1	
	Alternative method 3: comparing seven square miles of population		
	4695 × 2.6 × 7 or 85 449	M2	oe M1 4695 × 2.6 or 12 207 oe or 7 × 2.6 or 18.2 oe
	Town B and 85 449	A1	
	Alternative method 4: comparing areas with equal populations		
	7 × 2.6 or 18.2	M1	oe
	84 000 ÷ 4695 or [17.89, 17.9] or 18	M1	oe
	Town B **and** 18.2 **and** [17.89, 17.9] or 18	A1	