

Q1 June 2018

12	69.2	B1	for a correct measurement of either length or width, eg 11.5 (cm) or 5.8 (cm)	Allow measurements 11.3 to 11.7 cm and 5.6 to 6.0 cm NB: could work in mm [length] in the range 11.0 to 12.0 [width] in the range 5.0 to 6.5 NB: could work in mm This mark can be awarded for the conversion of any amount in cm to m (ie not from an area)
		P1	for process to find actual dimensions, eg [length] $\times$ 200 (= 2300) or [width] $\times$ 200 (= 1160)	
		P1	(indep) for process to convert to metres [length in cm] $\div$ 100 eg "2300" $\div$ 100 (= 23) or "1160" $\div$ 100 (= 11.6)	
		P1	(indep) for process to find the perimeter, eg "23" $\times$ 2 + "11.6" $\times$ 2 (= 69.2) or "11.5" $\times$ 2 + "5.8" $\times$ 2 (= 34.6)	calculations could be in cm or in m and could be scaled or unscaled figures
		A1	for an answer in the range 67.6 to 70.8	SC: award 3 marks for an answer in the range 67.6 to 70.8 using measurements outside the above ranges

Q2 June 2019

3	1500	B1	cao
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Q3 June 2019

17	9	M1	for a method to find the scaling factor eg "10.8" $\div$ "1.8" (= 6) or "1.8" $\div$ 1.5 (=1.2) or 1.5 $\div$ "1.8" (=0.833..) or a sf given from 5.5 to 6.5 or from 1.06 to 1.4 or from 0.75 to 0.94 eg used with 1.5	Could be shown on the diagram by appropriate working eg 6 steps Allow 10.6 to 11.0 and 1.6 to 2.0 for their measured lengths.
		A1	accept an answer in the range 8 to 10	

Q4 June 2020

1	3	B1	cao
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Q5 June 2022

29	108	M1	for $30 \times 60 \times 60$ (108000 metres per hour) or $30 \div 1000$ (= 0.03 kilometres per second) or $60 \times 60 \div 1000$ (=3.6 scale factor)	
		A1	cao	

Q6 June 2023

4	4	B1	cao
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Q7 June 2024

2	8	B1	cao
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Q8 June 2024

6 (a)	32	P1	for process to find length, eg 8×4	
		A1	cao	
(b)	2.5 cm	P1	for process to find length, eg $10 \div 4$ (= 2.5) oe eg $1 + 1 + 1 \div 2$ (= 2.5)	
		A1	for 2.5 cm oe eg 25 mm, 0.025 m	Must include correct units

Q9 Nov 2017

8		30	M1	for 12 m = 1.9 to 2 cm or for a scale factor of 2.25 to 2.75 (comparing length of bus with height of the building) or a complete method using the height of the bus to compare with the height of the building.
			A1	answer in range 27 to 33

Q10 Nov 2018

7	1.94 m or 194 cm	M1	for 188 or 0.06 or 194 or 1.94	
		A1	1.94 m or 194 cm	Do not accept numerical answers without the correct unit shown.

Q11 Nov 2019

5	4000	B1	cao
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Q12 Nov 2019

26	37 000	B1	cao
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Q13 Nov 2021

12 (a)	50	M1	$[2.5] \times 20 (=50)$	[2.5] a number in the range 2.3 to 2.7 or identified as the distance from Shelton to Trilby
		A1	for an answer in the range 46 to 54	
(b)	60	M1	$5 \times 1200 (=6000)$ or $1200 \div 100 (=12)$ or conversion $5 \div 100 (=0.05)$	
		A1	cao	

Q14 Nov 2021

18	10 000	B1	cao
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Q15 Nov 2022

14 (a)	30	B1	cao	
(b)	2238 to 2296	M1	for a complete method eg attempts to read from the graph at a factor of 80 and scales up to 80 using a correct scale or attempts to read from the graph using numbers that sum to 80 and finds the sum of their readings or attempts to read from the graph a number that they then go on to scale up to 80 using a correct scaling factor	Condone some inaccuracy in reading from the graph, which should be given to within the nearest 50g
		A1	for an answer in the range 2238 to 2296	

Q16 Nov 2022

27	(a)	0.008	B1	for 0.008 or 8×10^{-3}	May be awarded at any stage
	(b)	50	M1	for conversion from km to m eg $180 \times 1000 (= 180\,000)$ or for conversion from hours to seconds eg $180 \div (60 \times 60) (= 0.05)$ or for conversion from km per hour to metres per second, eg $1000 \div (60 \times 60) (= 0.277...)$ (Accept $(60 \times 60) \div 1000 (= 3.6)$)	
			M1	for a complete process eg $180 \times 1000 \div 3600$	
			A1	cao	

Q17 Nov 2024

11	(a)	16	B1	cao	Allow a tolerance of one small square for the reading eg $10\text{ km} = 6 - 6.5\text{ miles}$ $20\text{ km} = 12.25 - 12.75\text{ miles}$ $25\text{ km} = 15.25 - 15.75\text{ miles}$ $30\text{ km} = 18.5 - 19\text{ miles}$ for miles to km allow $1\text{ mile} = 1.6\text{ km}$ $17\text{ miles} = 27 - 28\text{ km}$
	(b)	48	M1	for taking a suitable reading from the graph that could be used to convert, eg $25\text{ km} = 15.5\text{ miles}$ or $17\text{ miles} = 27.2\text{ km}$	
			M1	ft, for a complete method, eg $"15.5" \times 2 + 17$ or $("27.2" + 50) \div 1.6$	
			A1	for an answer in the range $47 - 49.5$	