

Conversions and Units

June 2022 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
1	400	B1	cao	

June 2020 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
1	3	B1	cao	

June 2024 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
2	5	B1	cao	

June 2024 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
2	8	B1	cao	

November 2021 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
2	300	B1	cao	

November 2024 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
3	150	B1	cao	

November 2023 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
3	700	B1	cao	

June 2023 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
3	900	B1	cao	

June 2023 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
4	4	B1	cao	

November 2022 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
4	530	B1	cao	

November 2023 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
6	2300	P1	for converting to millilitres or litres eg $3 \times 1000 (= 3000)$ or $700 \div 1000 (= 0.7)$	Process marks may be awarded in either order
		P1	for finding the difference eg $[3000] - 700$ or $3 - [0.7] (= 2.3)$	$[3000]$ comes from 3×1000 or can be 30 or 300 or 30000 $[0.7]$ comes from $700 \div 1000$ or can be 7 or 70
		A1	accept 2.3 litres	

November 2023 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
9	5	P1	for process to work in consistent units, eg $12 \times 1000 (= 12000)$ or $105 \div 1000 (= 0.105)$	May be seen in subsequent calculations
		P1	for process to work with portion size, eg $105 \times 3 (= 315)$ OR $12 \div [0.105] (= 114.285\dots)$	For [0.105] allow use of 0.105, 1.05 or 10.5
		P1	for process to work with weight of food per week or number of days, eg " $315 \times 7 (= 2205)$ or " $315 \times 5 (= 1575)$ or " $315 \times 6 (= 1890)$ [12000] \div " 315 " ($=38(.095\dots)$) OR [114.285...] \div 3 ($= 38(.095\dots)$) or [114.285...] \div 7 ($= 16.3\dots$)	For [12000] accept use of 12000, 1200 or 120 For [114.285] allow continued use of incorrectly converted figure from previous mark.
		P1	(dep P2) for process to find number of weeks, eg " $12000 \div 2205 (= 5.4\dots)$ OR " $38.095\dots \div 7 (= 5.4\dots)$ OR " $16.3\dots \div 3 (= 5.4\dots)$ OR " $2205 \times 5 (= 11025)$ or " $2205 \times 6 (= 13230)$ OR 975 or -1230	
		A1	cao	If a correct answer is given without supportive working award 0 marks.

June 2020 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
9 (a)	25	B1	for 25, accept answer in range 24 to 26	
(b)	24	M1	for $40 \div 10 \times 6$	
		A1	cao	
(c)	Comment	C1	(dep B1 or M1) ft for comment for their results, eg the two answers are quite close or answer to (b) is less than answer to (a) or the rule gives a smaller answer	

November 2024 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
11 (a)	16	B1	cao	
(b)	48	M1	for taking a suitable reading from the graph that could be used to convert, eg 25 km = 15.5 miles or 17 miles = 27.2 km	Allow a tolerance of one small square for the reading eg 10 km = 6 – 6.5 miles 20 km = 12.25 – 12.75 miles 25 km = 15.25 – 15.75 miles 30 km = 18.5 – 19 miles for miles to km allow 1 mile = 1.6 km 17 miles = 27 – 28 km
		M1	ft, for a complete method, eg “15.5” × 2 + 17 or (“27.2” + 50) ÷ 1.6	For ft, allow use of their stated conversions but they must be conversions that could have come from graph
		A1	for an answer in the range 47 – 49.5	

November 2022 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
14 (a)	30	B1	cao	
14 (b)	2238 to 2296	M1 A1	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 for an answer in the range 2238 to 2296	Condone some inaccuracy in reading from the graph, which should be given to within the nearest 50g

June 2024 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
16 (a)	170	B1	for answer in the range 167 to 173	<p>May be seen as a build-up method using multiple readings that can be read from the graph but must total 1000 grams</p> <p>(ounces, grams) is a point on the line</p>
(b)	35	M1	<p>for correctly using readings from the graph as a factor of 1000 from the grams scale, eg 200×5 or 100×10 or 20×50 or 250×4</p> <p>or for method to use multiples of grams and corresponding ounces readings, eg $1000 \div \text{“answer to (a)”} \times 6$ or $1000 \div \text{grams} \times \text{ounces}$ oe</p>	
		A1	for an answer in the range 34 to 36	

November 2021 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
18	10 000	B1	cao	

June 2022 Paper 2

Question	Answer	Mark	Mark scheme	Additional guidance
24 (a)	19	P1	for process to find area available at festival B, eg $700 \times 2000 (=1\ 400\ 000)$	Accept either number rounded eg 207 or 188 Accept both numbers rounded eg 207 and 188
		P1	for finding the area available per person at one festival, eg $80\ 000 \div 425 (= 188.23..)$ or $[\text{area}] \div 6750 (= 207.40..)$	
		P1	for finding the area available per person at both festivals, eg $80\ 000 \div 425 (= 188.23..)$ and $[\text{area}] \div 6750 (= 207.40..)$	
		A1	answer in the range 18.7 to 19.5	
(b)	explanation	C1	for a valid statement relating to scale factor for area, Acceptable examples there are 10000 (cm ²) in 1 (m ²) because 1 m ² is the same as $100 \times 100 = 10000\ \text{cm}^2$ there are 2 side lengths that change from 1 m to 100 cm $300 \div 3$ is 100 should use 100^2 $300 \div 100 \div 100 = 0.03$ $3 \times 100 \times 100 = 30000$ Because it's area not length. Because it's in m ² not just metres He hasn't taken the squared sign into account Not acceptable examples there are 1000 cm in 1 m Callum is correct because $300 \div 3$ is 100 $3^2 = 9$ $300 \times 300 = 90000$ You have to square the number	

November 2022 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
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 $1000 \div (60 \times 60) (= 0.277\dots)$ (Accept $(60 \times 60) \div 1000 (= 3.6)$)	
		M1	for a complete process eg $180 \times 1000 \div 3600$	
		A1	cao	

June 2022 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
29	108	M1 A1	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) cao	