

Q1 June 2018

26	280	P1	for starting to use Pythagoras to find the missing side eg $8.4^2 - 7.2^2 (= 18.72)$	Award P1 for a correct Pythagorean statement eg $x^2 + 7.2^2 = 8.4^2$
		P1	for a complete process to find the missing side eg $\sqrt{70.56 - 51.84}$ or $\sqrt{18.72} (= 4.32\dots)$	4.3 truncated or rounded can imply P2
		P1	(dep P1) for a process to find the area of the triangular face eg [length of base] $\times 7.2 \div 2 (= 15.57\dots)$ OR the volume of the cuboid eg [length of base] $\times 7.2 \times 18 (= 560.7\dots)$	Uses a figure they show as the length of the base of the right angled triangle but dep on P1 Allow 15.57.. truncated or rounded if unsupported
		P1	for a complete process to find the volume of the prism eg "15.5.." $\times 18$ or "560.7.." $\div 2$	
		A1	answer in the range 278 – 281	If an answer is given in the range 278 to 281 but then incorrectly given to 3 sig fig this mark can still be awarded.

Q2 June 2019

23	8	P1	for working with volume of the cuboid, eg $30 \times 6 \times 19 (= 3420)$ OR for using $\frac{2}{3}$ with one dimension, eg. $30 \times 2 \div 3 (= 20)$	For P marks, ignore attempts at unit conversion
		P1	for "3420" $\times 2 \div 3 (= 2280)$ or "3420" $\div 3 (= 1140)$ OR "20" $\times 6 \times 19 (= 2280)$ OR "3420" $\div 275 (= 12.4\dots = 12 \text{ cups})$	
		P1	(dep on P2) for "2280" $\div 275 (= 8.29\dots)$ or "1140" $\div 275 (= 4.14\dots)$ OR "12" $\times 2 \div 3$ OR for $275 \times 8 (= 2200)$ or $275 \times 9 (= 2475)$	
		A1	cao	

Q3 June 2020

11	600 cm ³	M1	for a complete method to find the volume eg $4 \times 10 \times 15$	If extra steps are shown do not award this mark
		A1	for 600	Ignore incorrect or absent units for this mark
		B1	(indep) cm ³	Ignore incorrect or absent numerical answer for this mark

Q4 June 2023

14	864	B1	(indep) for process to convert to common units, eg $72 \times 10 (= 720)$ or $48 \times 10 (= 480)$ or $24 \times 10 (= 240)$ or $80 \div 10 (= 8)$ or $60 \div 10 (= 6)$ or $20 \div 10 (= 2)$ or or "96000" $\div 10^3 (= 96)$ or "82944" $\times 10^3 (= 82944000)$ or "0.864" $\times 10^3$	This mark can be awarded at any stage One correct conversion for their method is enough for the award of this mark
		P1	for using volume, eg $80 \times 60 \times 20 (= 96000)$ or $72 \times 48 \times 24 (= 82944)$ or for start of process to find number of packets using one dimension, eg "720" $\div 80 (= 9)$ or "480" $\div 60 (= 8)$ or "240" $\div 20 (= 12)$ or $48 \div "8" (= 6)$ or $72 \div "2" (= 36)$ or $24 \div "6" (= 4)$	Working may be seen on diagram. May be implied by correctly dividing the areas of corresponding faces
		P1	for full process with or without unit conversion, eg "82 944 000" $\div "96000"$ or "82944" $\div "96"$ or for "9" $\times "8" \times "12"$ or "36" $\times "6" \times "4"$ or "0.9" $\times "0.8" \times "1.2" (= 0.864)$	$9 \times 24 \times 4$ $12 \times 24 \times 3$ $12 \times 6 \times 12$ $36 \times 8 \times 3$ Note sight of digits 864 with decimal point and/or extra zeros scores P2
		A1	cao	

Q5 Nov 2019

Subtopic: Volume and Surface Area

29	No (supported)	P1	for finding the area of 3 or more faces of the cuboid and adding eg $(6 \times 8) + (8 \times 18) + (6 \times 18) \dots$ or “48” + “144” + “108” ... (= 300)	Could be an addition of <i>any</i> three faces eg $48 + 48 + 144$ etc. [surface area] must come from the addition of at least three attempts at area, but not from volume.
		P1	complete process to find surface area of cuboid, eg $6 \times 8 \times 2 + 6 \times 18 \times 2 + 8 \times 18 \times 2$ (= 600)	
		P1	for process to find side length of cube, eg [surface area] $\div 6$ and square rooting (= 10)	
		P1	(dep on previous P1) for processes to find volume of cube and volume of cuboid, eg [side length] ³ (= 1000) and $6 \times 8 \times 18$ (= 864)	
		A1	No with 1000 and 864 OR No with 600 and 544(.28...)	

Q6 Nov 2020

11	600 cm ³	M1	for a complete method to find the volume eg $4 \times 10 \times 15$	If extra steps are shown do not award this mark
		A1	for 600	Ignore incorrect or absent units for this mark
		B1	(indep) cm ³	Ignore incorrect or absent numerical answer for this mark

Q7 Nov 2023

28	65	P1	for a full process to find the volume of the container, eg $\pi \times 15^2 \times 43$ (= 30 394.9...)	These steps may be completed in a different order Accept 9675π
		P1	for a process to convert between cm ³ and litres, eg “30 394.9...” $\div 1000$ (= 30.39...) or [volume] $\div 1000$ or 0.47×1000 (= 470)	Accept 9.675π or $\frac{387}{40}\pi$
		P1	for a complete process to find the time taken, eg [volume] $\div 0.47$ or [volume] $\div$ “470”	[volume] can be any value they believe to be the volume that might have been incorrectly converted (or not at all) If an answer is given in the range in working and then rounded incorrectly award full marks.
		A1	answer in the range 64.6 to 65	

Q8 Nov 2024

28	7.96	M1	for method to find volume of cylinder, eg $\pi \times 3^2 \times 10$ (= 90π or 282.74...)	[volume] is any value they clearly think is the volume of the cylinder but must come from a calculation and must not be 3 or 10
		M1	for method to find density, eg $2250 \div$ “282.74...” or $2250 \div$ [volume]	
		A1	for answer in the range 7.95 to 7.96	