

VOLUME OF A PRISM

Pearson Edexcel - Thursday 4 June 2020 - Paper 2 (Calculator) Foundation Tier

1.

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

Pearson Edexcel - Monday 8 June 2020 - Paper 3 (Calculator) Foundation Tier

2.

29	96	M1	for a complete process to find the volume eg $6 \times 4 \times 10 \div 2$ (= 120)	
		M1	for a complete process, eg $(6 \times 4 \times 10 \div 2) \times 0.8$	
		A1	cao SC B1 for 192	

Pearson Edexcel - Thursday 7 June 2018 - Paper 2 (Calculator) Foundation Tier

3.

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...)	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..) OR the volume of the cuboid eg [length of base] $\times 7.2 \times 18$ (=560.7..)	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.

Pearson Edexcel - Thursday 2 November 2017 - Paper 1 (Non-Calculator) Foundation Tier

4.

13		343	P1	for finding area of one face eg $294 \div 6$ (= 49)
			P1	for $\sqrt{49}$ (=7)
			P1	for "49" \times "7" or for "7" \times "7" \times "7" oe
			A1	cao

Pearson Edexcel - Wednesday 8 November 2017 - Paper 3 (Calculator) Foundation Tier

5.

16	(a)		40	P1	for the start of a process to find the number of boxes that will fit along one edge, eg. $240 \div 40 (= 6)$ or $150 \div 30 (= 5)$ or $140 \div 35 (= 4)$ or $240 \div 30 (= 8)$ or $240 \div 35 (= 6.85\dots)$ ie 6 boxes), etc. or for a process to find a volume, eg. $40 \times 30 \times 35 (= 42000)$ or $0.4 \times 0.3 \times 0.35 (= 0.042)$ or $240 \times 150 \times 140 (= 5040000)$ or $2.4 \times 1.5 \times 1.4 (= 5.04)$ NB: condone incorrect or no conversion between m and cm
	(b)			explanation	P1
				P1	(dep on P1) for (their number of boxes) $\div 3$, eg. $120 \div 3 (= 40)$
				A1	cao
				C1	for explaining that it could take more time or it could take less time with an appropriate reason, eg. "less space means less number of boxes which will take less time" or "it will take more time since a different arrangement would be required"

Pearson Edexcel – Specimen 2 - Paper 3 (Calculator) Foundation Tier

6.

29	(a)		36.4	P1	start process eg method to find area of trapezium
	(b)			explanation	P1
				P1	process to find time eg volume $\times 1000 \div 300$
				P1	process to find 85% of volume or of time
				A1	for 36.4 or 36 mins 24 secs
				C1	explanation eg if the average rate was slower it would take more time, if the average rate was faster it would take less time

Pearson Edexcel – Specimen 1 - Paper 1 (Non-Calculator) Foundation Tier

7.

24		explanation	M1	works with volume eg 240000	begins working back eg $70 \div 2.50 (= 28)$
			M1	uses conversion 1 litre = 1000 cm ³	uses conversion 1 litre = 1000 cm ³
			M1	uses 8000 eg vol $\div 8000 (= 30)$	uses 8000 eg $"28" \times 8000 (= 224000)$
			M1	uses "30" eg $"30" \times 2.50$	works with vol. eg 224000
			C1	for explanation and 75 stated	for explanation with 240000 and 224000

OCR – Tuesday 03 November 2020- Morning - Paper 1 (Calculator) Foundation Tier

8.

3		70	2	M1 for $7 \times 5 \times 2$ oe	
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OCR November 09 November 2020- Morning (Calculator) Foundation Tier

9.

20		385 with correct working	6	<p>M2 for [mass of one panel =] $2.4 \times 1.2 \times 0.018 \times 750$ or $240 \times 120 \times 1.8 \times 0.750$ or M1 for figs $24 \times$ figs $12 \times$ figs $18 \times$ figs 750 or $2.4 \times 1.2 \times 0.018$ or $240 \times 120 \times 1.8$</p> <p>AND</p> <p>B1 for 15000 [kg] or 15000000g seen or <i>their</i> mass correctly converted to tonnes</p> <p>M1 for $\frac{\text{figs } 15}{\text{their mass}}$</p> <p>A1 for 385[...] to 387</p> <p>If 0 or B1 scored instead award SC2 for answer 385 with no or insufficient working or SC1 for answer 385[...] to 387 with no working</p>	<p>"Correct working" requires evidence of at least M2 AND B1 i.e. correct and consistent units used</p> <p>soi by 38.8 to 38.9 [kg] soi by 38800 to 38900 [g]</p> <p>soi by 0.0518 to 0.0519 [m³] soi by 51800 to 51900 [cm³] Assume <i>their</i> mass unit from M2, but do not assume from M1 only</p> <p>Accept any figure but not 2.4, 1.2, 1.8 and 750 for <i>their</i> mass For M1 accept one or more trial(s) of <i>their</i> mass \times an integer in attempt to = <i>their</i> figs 15</p>
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OCR Tuesday 5 November 2019 – Morning (Calculator) Foundation Tier

10.

12		150 cm ²	4 1	<p>M1 for $\sqrt[3]{125}$ may be implied by 5 M1 for <i>their</i> 5² M1 for <i>their</i> 5² \times 6</p>	This could be on a diagram
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OCR Wednesday 8 November 2017– Morning (Calculator) Foundation Tier

11.

3	(a)	48	2	M1 for $6 \times 2 \times 4$	May be in stages
	(b)	8	3	<p>M2 for $\sqrt{\frac{320}{5}}$ or M1 for $\frac{320}{5}$ soi 64 or $5k^2 = 320$</p>	

AQA Monday 6 November 2017 – Morning (Calculator) Foundation Tier

12.

25(a)	Correct product using a point on the curve or correct division using a point on the curve	B1	eg $2 \times 12 (= 24)$ or $3 \times 8 (= 24)$ or $5 \times 4.8 (= 24)$ or $6 \times 4 (= 24)$ or $10 \times 2.4 (= 24)$ or $24 \div 2 = 12$ or $24 \div 6 = 4$
	Additional Guidance		
	$1 \times 24 (= 24)$		B0
	$12 + 12 (= 24)$		B0
	$3 \times 4 \times 2 = 24$		B0
	For multiplication, 24 does not have to be shown		
	Ignore any units seen		
	Ignore any lines on the graph		
	$8 \times 3 = 24$ and $12 + 12 = 24$ (choice)		B0
area 6 and length 4 and volume 24		B0	

25(b)	Alternative method 1		
	Reading from 5 on the graph to give [4.7, 4.9]	M1	
	$\frac{1}{2} \times 6 \times h = [4.7, 4.9]$ or $[4.7, 4.9] + (\frac{1}{2} \times 6)$	M1dep	oe
	[1.56, 1.64]	A1	
	Alternative method 2		
	$24 + 5$ or 4.8 or $\frac{1}{2} \times 6 \times h$ or $\frac{1}{2} \times 6 \times h \times 5$	M1	oe
	$\frac{1}{2} \times 6 \times h = 24 + 5$ or $24 + 5 + (\frac{1}{2} \times 6)$ or $\frac{1}{2} \times 6 \times h \times 5 = 24$ or $15h = 24$ or $24 + (\frac{1}{2} \times 6 \times 5)$ or $24 + 15$	M1dep	oe
	1.6	A1	
	Additional Guidance		