Paper: 1MA1/2H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
4 **Q1**	8	P1 P1 P1 A1	for working with volume of the cuboid, eg 30 × 6 × 19 (= 3420) **OR** for using $\frac{2}{3}$ with one dimension, eg. 30 × 2 ÷ 3 (= 20) for "3420" × 2 ÷ 3 (= 2280) **or** "3420" ÷ 3 (= 1140) **OR** "20" × 6 × 19 (= 2280) **OR** "3420" ÷ 275 (= 12.4… = 12 cups) (dep on P2) for "2280" ÷ 275 (= 8(.29...)) **or** "1140" ÷ 275 (= 4(.14...)) **OR** "12" × 2 ÷ 3 **OR** for 275 × 8 (= 2200) **or** 275 × 9 (= 2475) cao	For P marks, ignore attempts at unit conversion

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
Q2 6	No Supported	P1	for finding the area of a circle eg $\pi \times 0.8^2$ (= 2.01...)	Must be area of circle and not part of a volume, eg $\pi r^2 h$ May be seen as $2\pi r^2$
		P1	for finding the curved surface area eg $2\pi \times 0.8 \times 1.8$ (= 9.047…)	May be seen from $2\pi rh$ or from πdh
		P1	for use of the coverage information with an area eg "2.01…" ÷ 5 (= 0.402…) or "4.02…" ÷ 5 (= 0.804…) or "9.047…" ÷ 5 (= 1.8095…) or "11.058" ÷ 5 (= 2.2116..) or "13.069…" ÷ 5 (= 2.6138…) **OR** for process to find total coverage for comparison eg 5 × 7 (= 35)	Accept numbers without working written to no less than 2dp Do not award if a volume has been used as part of the calculation. An independent mark for 5 ×7
		P1	(dep P1) for finding total surface area for 3 tanks eg [total surface area] × 3 (= 39.2…) **OR** for complete process to find the number of tins needed for total area of 3 tanks eg "13.069"....× 3 ÷ 5 (= 7.84..…) **OR** for complete process to find coverage needed from each tin eg "13.069"...× 3 ÷ 7 (= 5.6...)	[total surface area] must come from the addition of two attempts at area, but not from volume.
		C1	for conclusion "No" supported by accurate figures eg 8 tins **or** 7.84 (> 7) **or** 39.2 > 35 **or** 5.6 (>5)	Clear statement that there is **not** enough paint supported by correct figures for comparison. NB: 2.6 × 3 = 9 tins needed is inaccurate 8 or 7.84 tins is sufficient without restating the 7, 5.6 m^2 is sufficient without restating the 5 but 39.2 and 35 are needed for comparison. A statement of "No, 8 tins" alone gets 0 marks without supporting working.

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
8 **Q3**	450	M1 M1 A1	for 18 ÷ 3 (=6) for substitution eg. $75 = \frac{F}{"6"}$ or 75 × "6" cao	Ignore units

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 **Q4**	2820	P1	for start to process to find height of triangle, eg $\tan(40) = \frac{h}{5}$ oe **or** equivalent process to find the height of the triangle **or** start to process to find slant height, eg $\frac{10}{\sin 100} = \frac{x}{\sin 40}$	
		P1	for complete process to find height of triangle, eg 5tan 40 (= 4.19...) **or** complete process to find the slant height, eg $\frac{10}{\sin 100} \times \sin 40$ (= 6.5...)	Accept 4.2
		P1	for start of process to find volume of prism, eg 10 × 20 × 12 (= 2400) or 0.5 × 10 × "4.19..."× 20 (= 419....) or $\frac{1}{2}$ × 10 ×"6.52..." ×sin 40 × 20 (419....) **or** process to find total area of cross section, eg 0.5 × 10 × "4.19..." + 10 × 12 (= 140.9...) or $\frac{1}{2}$ × "6.52..." ×"6.52..." × sin 100 + 10 × 12 (= 140.9...)	10 × 20 × 12 may be seen as part of a calculation to find the volume of the prism
		P1	for complete process to find total volume, eg (0.5 × 10 × "4.19..." + 10 × 12) × 20	
		A1	for an answer in the range 2810 to 2820	If an answer is given in the range in working and then rounded incorrectly award full marks.

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
6 **Q5**	12	P1 P1 A1	for a process to find the area of cross section, eg $750 \div 25$ (= 30) oe **or** $\frac{1}{2} \times 5 \times h$ oe for a correct equation in h, eg $750 \div 25 = \frac{1}{2} \times 5 \times h$ oe **or** $\frac{1}{2} \times 5 \times h \times 25 = 750$ oe **or** for a complete process to find h, eg $\frac{750}{25} \times \frac{2}{5}$ oe **or** "30" $\times 2 \div 5$ cao SC B1 for answer of 6 if P0 scored	May use any letter for h or may use ?

Paper: 1MA1/3H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
8 **Q6**	8	P1 P1 P1 P1 A1	process to start the problem eg $xy = 45$ **and** $xz = 15$ **and** $yz = 27$ **or** 5×9 (=45) **and** 3×9 (=27) **and** 3×5 (=15) **or** 3, 5 and 9 stated for $3 \times 5 \times 9$ (=135) **or** 2 of "9" ÷ 2.5 (=3.6) **or** "5" ÷ 2.5 (=2) **or** "3" ÷ 2.5 (=1.2) for 2.5^3 (=15.625) **or** all of "9" ÷ 2.5 (=3.6) **and** "5" ÷ 2.5 (=2) **and** "3" ÷ 2.5 (=1.2) for a complete process to find the number of cubes possible eg [volume] ÷ "15.625" (=8.64) **or** "3.6" × "2" × "1.2" (=8.64) cao	Maybe seen on diagram [Volume] must come from multiplying together what they clearly indicate as the 3 dimensions of the cuboid. The three dimensions cannot be 45, 27 and 15

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Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 **Q7**	No (supported)	P1	for finding the area of 3 or more faces of the cuboid **and** adding eg (6 × 8) + (8 × 18) + (6 × 18) … or "48" + "144" + "108" … (= 300)	Could be an addition of *any* three faces eg 48 + 48 + 144 etc.
		P1	complete process to find surface area of cuboid, eg 6 × 8 × 2 + 6 × 18 × 2 + 8 × 18 × 2 (= 600)	
		P1	for process to find side length of cube, eg [surface area] ÷ 6 **and** square rooting (= 10) **OR** for a process to find the volume of the cuboid 6 × 8 × 18 (= 864) **and** cube rooting (= 9.52…) to find a side length	[surface area] must come from the addition of at least three attempts at area, but not from volume.
		P1	(dep on previous P1) for processes to find volume of cube **and** volume of cuboid, eg [side length]^3 (= 1000) **and** 6 × 8 × 18 (= 864) **OR** (dep on previous P1) for process to find surface area of cube, eg. ("9.52…")^2 × 6 (= 544.28…)	
		A1	No with 1000 **and** 864 **OR** No with 600 **and** 544(.28…)	

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Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 **Q8**	3.6	P1 P1 P1 A1	process to find the volume scale factor, eg 1587.762 ÷ 58.806 (= 27) **or** 58.806 ÷ 1587.762 (= 0.037…) process to find the height of **B**, eg 2 × 43.74 ÷ 8.1 (= 10.8) **or** process to find the area of **A,** eg 43.74 ÷ $(\sqrt[3]{"27"})^2$ (= 4.86) **or** 43.74 × $(\sqrt[3]{"0.037..."})^2$ (= 4.86) complete process to find height of **A**, eg "10.8" ÷ $\sqrt[3]{"27"}$ **or** "4.86" × 2 ÷ (8.1 ÷ $\sqrt[3]{"27"}$) cao	

Paper: 1MA1/1H				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 **Q9**	278	P1 P1 A1	for working out at least 3 areas from 5×7 (= 35) 5×6 (= 30) 7×6 (= 42) 4×4 (= 16) for a complete process, eg "35"× 2 + "30"× 2 + "42" + ("42" – "16") + "16" × 5 oe or "35"× 2 + "30"× 2 + "42" × 2 + "16" × 4 **OR** for a process to find the total surface area of at least 5 faces for each solid, eg "35"× 2 + "30"× 2 + "42" **and** "16"× 6 or "35"× 2 + "30"× 2 + "42"× 2 **and** "16"× 5 cao	Total surface area of cuboid = 214 Total surface area of cube = 96