

<b>1</b>	$1.5 \times 2 \times 8 (= 24 \text{ cm}^3)$			M1	for finding the volume of the cuboid
	e.g. $(V =) \frac{5.73 \times 1000}{19.32} (= 296.58\dots)$ or $(M =) 19.32 \times "24" (= 463.68)$			M2	complete method to find the volume of statue or the mass of one block, could work in g or kg (if not M2 then award M1 for correct use of density formula e.g. $19.32 = \frac{5.73 \times 1000}{V}$ or $19.32 = \frac{M}{"24"}$ )
	e.g. "296.58" $\div$ "24" (= 12.3576...) or "5730" $\div$ "463.68" (= 12.3576...)			M1	could work in g or kg
		13	5	A1	cao
<b>Total 5 marks</b>					

<b>2</b>	$30 = \frac{27}{1.2x}$			3	M2 M1 for $\frac{27}{1.2x}$
		0.75		A1	oe
<b>Total 3 marks</b>					

<b>3</b>	$19.3 \times 150$			2	M1
		2895		A1	
<b>Total 2 marks</b>					

<b>4</b>	eg $(V =) \pi \times \left(\frac{18}{2}\right)^2 \times 3.5 (= 890.64\dots)$ or $\frac{567}{2} \pi$			3	M1	correct method to calculate volume
	eg $(7.04 \times 1000) \div "890.64"$				M1	correct method to calculate density (if volume is incorrect, their value can be used if clearly labelled)  accept use of 7.04 or an incorrect conversion from kg to g for mass
			7.9		A1	accept 7.9 – 7.92
<b>Total 3 marks</b>						

<b>5</b>	$1.4 = \frac{72}{(\text{area})}$ oe			4	M1	
	$(\text{area} =) \frac{72}{1.4} (= \frac{360}{7} = 51.4\dots)$ oe				M1	(51.4 or better)
	"51.4..." $\times 18$ or $r = \sqrt{\frac{"51.4\dots"}{\pi}} (= 4.046\dots)$ and $\pi \times "4.046" \times 18$				M1	allow use of $\pi r^2$ to find the radius and then using $\pi r^2 h$ to find the volume
		926		A1	Allow 925 – 928	
<b>Total 4 marks</b>						

<b>6</b>	eg $\pi \times 3^2 \times 7 (= 63\pi \text{ or } 197.9\dots)$			3	M1	for method to find the volume of Solid A
	eg $\frac{2000}{[\text{vol A}]}$ or $\frac{3375}{450} (= 7.5 \text{ oe})$ or $\frac{2000 + 3375}{[\text{vol A}] + 450}$				M1	(indep) for method to find the density of Solid A, B or C, allow use of their volume for Solids A and C
	Correct answer scores full marks (unless from obvious incorrect working)	8.3			A1	accept 8.29 – 8.31
<b>Total 3 marks</b>						

7	$(V =) \frac{1950}{7.8} (=250)$ or $7.8 = \frac{1950}{w \times 5 \times 4}$ or $7.8 = \frac{1950}{w \times 20}$	3	M1 for correct method to find volume using mass $\div$ density or a correct equation with correct expression for volume (may be embedded in another calculation)
	eg $w = \frac{1950}{7.8 \times 5 \times 4}$ or $20w = \frac{1950}{7.8}$ or $20w = "250"$  or $4 \times 5 \times w = "250"$  <b>OR</b> eg $\frac{1950}{5 \times 4 \times 7.8}$ or $1950 \div (20 \times 7.8)$ or $1950 \div 156$ or $"250" \div 20$		M1 for a fully correct equation in $w$ or a fully correct calculation to find the value of $w$ (may be labelled eg $x$ or $L$ )
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	12.5	A1
<b>Total 3 marks</b>			