

Question	Answer	Mark	Mark scheme	Additional guidance
16 (a)	4.9	P1	<p>for beginning to work with scale factors</p> <p>eg <math>\left(\frac{h}{12}\right)^3</math> or <math>\left(\frac{12}{h}\right)^3</math> or <math>\frac{90}{1350} \left(= \frac{1}{15}\right)</math> or <math>\frac{1350}{90} (=15)</math> or <math>90 : 1350</math> oe</p> <p>P1 for equating scale factors eg <math>\left(\frac{h}{12}\right)^3 = \frac{90}{1350}</math> or <math>\left(\frac{12}{h}\right)^3 = "15"</math> or for finding the linear scale factor, eg <math>\sqrt[3]{\frac{90}{1350}}</math> or <math>\sqrt[3]{"15"}</math> (<math>= 2.46(6\dots)</math>)</p> <p>P1 for a complete method eg <math>\sqrt[3]{12^3 \times \frac{90}{1350}}</math> or <math>12 \times \sqrt[3]{\frac{90}{1350}}</math> or <math>\frac{12}{\left(\sqrt[3]{"15"}\right)}</math></p> <p>A1 for answers in the range 4.8 to 4.9</p>	
(b)	$(15)^{\frac{2}{3}}$	B1	for $15^{\frac{2}{3}}$ or $(\sqrt[3]{15})^2$ or $\sqrt[3]{15^2}$ or $225^{\frac{1}{3}}$	If given in an acceptable form, then given as a decimal, isw and award