

1	eg $4\pi R^2 = 9 \times 4\pi r^2$ oe or		5	M1	M2 for (vol SF $\Rightarrow$ ) 27 or $\frac{1}{27}$ or
	$R = 3r$ oe or 1:3 or 3:1 or 3 or $\frac{1}{3}$			M1 ( a correct scale factor of 3 or $R = 3r$ oe implies the first M1)	$3^3$ or $\frac{1}{3^3}$
	eg $\frac{4}{3}\pi(3r)^3 - \frac{4}{3}\pi r^3 = 117\pi$ oe or $\frac{4}{3}\pi r^3 - \frac{4}{3}\pi\left(\frac{1}{3}r\right)^3 = 117\pi$ or $27 \times \frac{4}{3}\pi r^3 - \frac{4}{3}\pi r^3 = 117\pi$ oe or $\frac{4}{3}\pi r^3 - \frac{1}{27} \times \frac{4}{3}\pi r^3 = 117\pi$ oe or oe			M1 for a <b>correct</b> equation based on volumes with only one variable eg $R$ or $r$ or $x$ (M3 for $26 \times \frac{4}{3}\pi r^3 = 117\pi$ oe or $26 \times (Vol)_B = 117\pi$ or  $\frac{26}{27} \times \frac{4}{3}\pi r^3 = 117\pi$ oe or $\frac{26}{27} \times (Vol)_A = 117\pi$	
	$(r =) \sqrt[3]{\frac{117 \times 3}{104}} \left( = \sqrt[3]{\frac{27}{8}} \right)$ or $(R =) \sqrt[3]{\frac{117 \times 81}{104}} \left( = \sqrt[3]{\frac{729}{8}} = \frac{9}{2} \right)$			M1 dep on previous M mark	
	Working required	$\frac{3}{2}$		A1 oe dep on M2	
Total 5 marks					