

Question	Working	Answer	Mark	Notes
21	$\left(\sqrt{\frac{10478}{1550}}\right)^3 \left[ = \frac{2197}{125} \right] \text{ oe}$			M2 The correct scale factor (17.576) Allow (M1) for $\left(\frac{10478}{1550}\right)^3$ or $\sqrt{\frac{10478}{1550}} = \frac{13}{5}$ or $5\sqrt{62}$ and $13\sqrt{62}$ identified as the linear SF (Accept 5 and 13)
	$V_A \times \frac{2197}{125} - V_A = 62160 \text{ oe}$			M1 dep on at least one of the previous M being awarded. For equation with their SF. May be implied.
	$[V_A =] \frac{62160}{\frac{2197}{125} - 1}$			M1 dep on previous M mark being awarded. For making $V_A$ the subject. Allow equivalent methods
		3750		A1 cao Working not required, so correct answer scores full marks (unless from obvious incorrect working)
			5	
<b>Alternative</b>				
	$\left(\sqrt{\frac{1550}{10478}}\right)^3 \left[ = \frac{125}{2197} \right] \text{ oe}$			M2 The correct scale factor (0.0568957...) Allow (M1) for $\left(\frac{1550}{10478}\right)^3$ or $\sqrt{\frac{1550}{10478}}$ or $5\sqrt{62}$ and $13\sqrt{62}$ identified as the linear SF (Accept 5 and 13)
	$V_B - V_B \times \frac{125}{2197} = 62160 \text{ oe}$			M1 dep on at least one of the previous M being awarded. For equation with their SF. May be implied
	$[V_B =] \frac{62160}{1 - \frac{125}{2197}} - 62160$			M1 dep for making $V_B$ the subject and subtracting 62160. Allow equivalent methods
		3750		A1 cao Working not required, so correct answer scores full marks (unless from obvious incorrect working)
<b>Total 5 marks</b>				