

| 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 $\sqrt{\frac{10478}{1550}} \left[= \frac{13}{5} \right]$ 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 | |
| Alternative | | | | |
| | $\left(\sqrt{\frac{1550}{10478}}\right)^3 \left[= \frac{125}{2197} \right] \text{ oe}$ | | | 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) |
| | $V_B - V_B \times " \frac{125}{1297} " = 62160 \text{ oe}$ | | | M1 dep on at least one of the previous M being awarded. For equation with their SF. May be implied |
| | $[V_B =] \frac{62160}{1 - " \frac{125}{2197} "}$ | | | 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) |
| | | | | Total 5 marks |