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| 6 | | $k = \frac{50}{3.6^3} \quad \text{or} \quad \frac{3125}{2916} \quad \text{or} \quad 1.07(167)$ $'1.07'v^3 = 225 \quad \text{or} \quad v^3 = \frac{225}{'1.07'} \quad \text{oe}$ $\text{or } v = \sqrt[3]{\frac{225}{'1.07167'}}$ | <p>M1</p> <p>M1</p> | <p>Attempt find k. Must involve division, and cube or cube root Can be implied by 1.07 seen, or correct v</p> <p>or $v = \sqrt[3]{\frac{225}{\text{their } k}} \quad \text{oe} \quad \text{SC } k = \frac{50}{3.6^2} \quad \text{oe Max M1M0A0}$</p> |
| <p>Alternative Method</p> $\frac{v^3}{3.6^3} = \frac{225}{50}$ $\frac{v}{3.6} = \sqrt[3]{\frac{225}{50}} \quad \text{or} \quad v = 3.6 \times \sqrt[3]{\frac{225}{50}}$ | | <p>M1</p> <p>M1</p> | <p>Attempt use proportion. Must involve cube or cube root</p> <p>Correct expression for v</p> | |
| <p>$v = 5.94$ (3 sf)</p> <p>(Wind speed = 5.94 m/s)</p> | | <p>A1</p> <p>[3]</p> | <p>Allow without units</p> | |