| | | | | | | |
|---|---|---|---|---|---|---|
| **17** | (a) | $y = kx^3$ **or** $ky = x^3$ | | | M1<br>(NB. Not for $y = x^3$)<br>Constant of proportionality must be a symbol such as $k$ | M2 for<br><br>$20h = k \times h^3$ oe |
| | | $20h = k \times h^3$ oe | | | M1 substitution of $x$ and $y$ into a correct formula | |
| | | | $y = \frac{20x^3}{h^2}$ | 3 | A1 for $y = \frac{20x^3}{h^2}$ oe<br><br>Award 3 marks if answer is $y = kx^3$ and $k = \frac{20}{h^2}$ oe is seen in part (a) or in part (b) | |
| | (b) | $\sqrt[3]{67.5h \div '\frac{20}{h^2}'}$ oe | | | M1 ft, dep on at least M1 in part (a), complete method to find $x$ | |
| | | | $1.5h$ | 2 | A1 accept $\frac{3}{2}h$ or $\frac{3h}{2}$ | |
| | | | | | | **Total 5 marks** |