

SUBSTITUTION INTO FORMULAE

Example 2

If $V = \pi r^2 h$, find:

(a) V when $r = 3.5$, $h = 5$

(b) r when $V = 275$, $h = 14$

Solution

(a) $V = \pi \times 3.5^2 \times 5$
 $= 61.25\pi$ (exact value)
 $= 192.4$ correct to one decimal place

(b) $r^2 = \frac{V}{\pi h}$
 $r^2 = \frac{275}{14 \times \pi}$
 $r = \sqrt{\frac{275}{14\pi}}$ (exact value)
 $r = 2.5$ correct to one decimal place