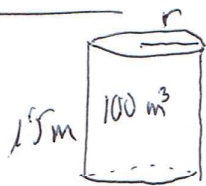
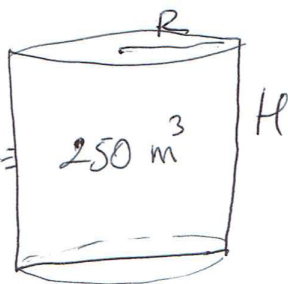


Ejercicio 19

Datos



= semejante =



Ride: radio del mayor

$$V_{\text{cilindro}} = \pi r^2 h \rightarrow \text{(menor)} \rightarrow 100 = \pi \cdot r^2 \cdot 1.5 \rightarrow$$

$$\rightarrow r^2 = \frac{100}{\pi \cdot 1.5} \rightarrow r = \sqrt{\frac{100}{\pi \cdot 1.5}} = 4.6066 \text{ m}$$

Como los cilindros son semejantes

$$\frac{V_{\text{grande}}}{V_{\text{pequeño}}} = k^3 \rightarrow \frac{250}{100} = k^3 \rightarrow k = \sqrt[3]{\frac{250}{100}} = 1.3572$$

Entonces la relación entre los radios es:

$$\frac{R}{r} = 1.3572 \rightarrow \frac{R}{4.6066} = 1.3572 \rightarrow$$

$$\rightarrow R = 1.3572 \cdot 4.6066 = 6.2521 \text{ m}$$

Sol: El radio del cilindro mayor mide 6.2521 m.