

1 Num cone reto, a geratriz e a altura medem respetivamente 25 cm e 20 cm.

a) Prova que o valor de r é igual a 15 cm.

Resposta: $r^2 + 20^2 = 25^2$

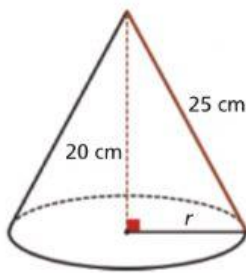
$$\Leftrightarrow r^2 + = = \Leftrightarrow$$

$$\Leftrightarrow r^2 = -$$

$$\Leftrightarrow r^2 =$$

$$\Leftrightarrow r = \sqrt{\quad}$$

$$\Leftrightarrow r = 15 \text{ cm}$$



b) Calcula o volume do sólido.

$$V_{\text{cone}} = \frac{1}{3} \times A_{\text{base}} \times \text{altura}$$

$$\Leftrightarrow V_{\text{cone}} = \frac{1}{3} \times \pi r^2 \times h$$

$$\Leftrightarrow V_{\text{cone}} = \frac{1}{3} \times \pi \times 15^2 \times 20$$

$$\Leftrightarrow V_{\text{cone}} = \frac{1}{3} \times \pi \times 4500$$

$$\Leftrightarrow V_{\text{cone}} = 1500\pi \text{ cm}^3$$

c) Calcula a área, arredondada às unidades, da superfície lateral do cone

$$A_{\text{lateral do cone}} = \pi r g$$

$$A_{\text{lateral do cone}} = \pi \times 15 \times 25$$

$$A_{\text{lateral do cone}} = 1178 \text{ cm}^2$$

2 O prisma ao lado tem 15,4 cm de altura.

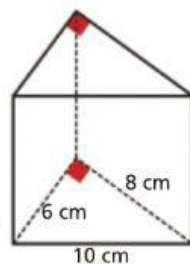
Determina:

a) A área do triângulo.

$$A_{\text{base(triângulo)}} = \frac{\text{base} \times \text{altura}}{2}$$

$$\Leftrightarrow A_{\text{base(triângulo)}} = \frac{10 \times 8}{2}$$

$$\Leftrightarrow A_{\text{base}} = 40 \text{ cm}^2$$



b) A área lateral.

$$A_{\text{lateral}} = (A_{\text{base}} + A_{\text{base}} + A_{\text{base}}) \times \text{altura}$$

$$A_{\text{lateral}} = 120 \times 15.4$$

$$A_{\text{lateral}} = 1848 \text{ cm}^2$$

c) A área total.

$$A_{\text{total}} = A_{\text{base}} + A_{\text{lateral}} + A_{\text{base}}$$

$$\Leftrightarrow A_{\text{total}} = 40 + 1848 + 40$$

$$\Leftrightarrow A_{\text{total}} = 1928 \text{ cm}^2$$

d) O volume do sólido.

$$V_{\text{Prisma}} = A_{\text{base}} \times \text{altura}$$

$$\Leftrightarrow V_{\text{Prisma}} = 40 \times 15.4$$

$$\Leftrightarrow V_{\text{Prisma}} = 616 \text{ cm}^3$$