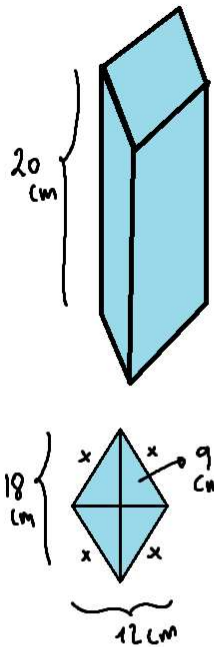


Calcula el área y el volumen de...

a) Un prisma de altura 20 cm y cuya base es un rombo de diagonales 18 cm y 12 cm



$$Área = Ab \cdot 2 + A_{lat}$$

$$Ab = \frac{D \cdot d}{2} = \frac{18 \cdot 12}{2} = 108 \text{ cm}^2$$

$$A_{lat} = A_{rectáng} \cdot 4 = b \cdot h \cdot 4 = 10'82 \cdot 20 \cdot 4 = 865'6 \text{ cm}^2$$

$$\underline{Área total} = 108 \cdot 2 + 865'6 = \underline{1081'6 \text{ cm}^2}$$

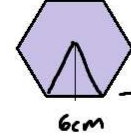
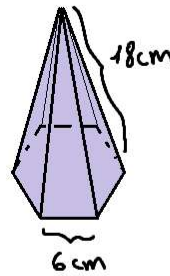
$$\underline{Volumen} = Ab \cdot h = 108 \cdot 20 = \underline{2160 \text{ cm}^3}$$

$$x^2 = 9^2 + 6^2$$

$$x^2 = 81 + 36$$

$$x = \sqrt{117} = 10'82 \text{ cm}$$

b) Una pirámide hexagonal regular de arista lateral 18 cm y arista de la base 6 cm.



$$x^2 + 3^2 = 6^2$$

$$x^2 = 6^2 - 3^2$$

$$x^2 = 27$$

$$x = 5'2 \text{ cm}$$

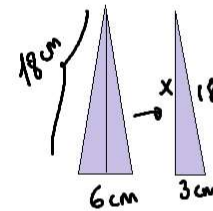
$$Área = A_{lat} + A_{base}$$

$$\rightarrow A_{base} = \frac{P \cdot ap}{2} = \frac{36 \cdot 5'2}{2} = 93'6 \text{ cm}^2$$

$$\rightarrow A_{lat} = A_{triángulo} \cdot 6 = \frac{b \cdot h}{2} \cdot 6 = \frac{6 \cdot 17'75}{2} \cdot 6 = 319'5 \text{ cm}^2$$

$$\underline{Área total} = 319'5 + 93'6 = \underline{413'1 \text{ cm}^2}$$

$$\underline{Volumen} = \frac{Ab \cdot h}{3} = \frac{93'6 \cdot 17'75}{3} = \underline{553'8 \text{ cm}^3}$$

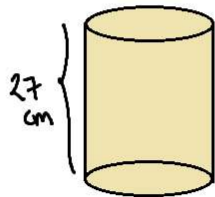


$$x^2 + 3^2 = 6^2$$

$$x^2 = 18^2 - 3^2$$

$$x = \sqrt{315} = 17'75 \text{ cm}$$

c) Un cilindro de altura 27 cm y cuya circunferencia mide 44 cm de longitud.



Si la circunferencia mide 44 cm de longitud,
entonces $L = 2\pi r = 44 \Rightarrow r = \frac{44}{2 \cdot \pi} \Rightarrow r = 7 \text{ cm}$

$$Área = A_{lat} + A_{base} \cdot 2$$

$$A_{lat} = 2\pi r \cdot h = 44 \cdot 27 = 1188 \text{ cm}^2$$

$$A_{base} = \pi r^2 = \pi \cdot 7^2 = 153'94 \text{ cm}^2$$

$$\underline{Área total} = 1188 + 153'94 \cdot 2 = \underline{1495'88 \text{ cm}^2}$$

$$\underline{Volumen} = Ab \cdot h = 153'94 \cdot 27 = \underline{4156'38 \text{ cm}^3}$$