

Solucionario 8º ESO - 25/08/2020

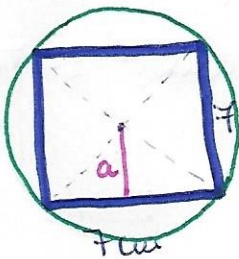
21

$$\text{Área} = \frac{P \cdot a}{2}$$

con $P = \text{perímetro}$ $a = \text{apotema}$
 $P = 7 \cdot 6$ ($\text{Perímetro polígono regular} = n \cdot \text{lado}$)

$$130'8 = \frac{7 \cdot 6 \cdot a}{2} \Leftrightarrow \underline{\underline{a \approx 6'23 \text{ cm}}}$$

22

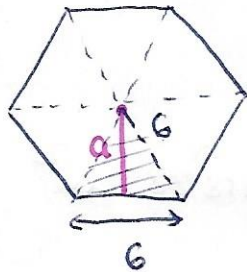
$$A = \frac{P \cdot a}{2} = \frac{4 \cdot 7 \cdot 3'5}{2} = 49 \text{ cm}^2$$


$a = 3'5 \text{ cm}$

23

$$A = \frac{P \cdot a}{2} = \frac{6 \cdot 6 \cdot a}{2}$$

¿a?



Aplicando T. Pitágoras

$$6^2 = a^2 + 3^2$$

$$a = \sqrt{6^2 - 3^2} \approx 5'20 \text{ cm}$$

$$A = \frac{6 \cdot 6 \cdot 5'2}{2} = 93'53 \text{ cm}^2$$

Forma 2

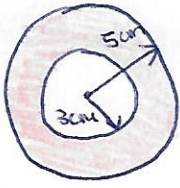
Calculamos el área de un triángulo $A_{\text{triángulo}} = \frac{6 \cdot 5'20}{2}$

$$A_{\text{hexágono}} = 6 \cdot A_{\text{triángulo}} = 6 \cdot \frac{6 \cdot 5'20}{2} = \underline{\underline{93'53 \text{ cm}^2}}$$

26) Calcule a área de um círculo que tem 6 cm de diâmetro

$$A = \pi \cdot r^2 = \pi \cdot 3^2 = 9\pi \text{ cm}^2 \approx 28'27 \text{ cm}^2$$

27)

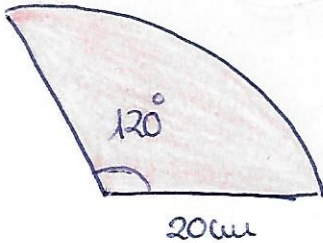


$$A_{(r=5\text{cm})} = \pi \cdot 5^2 \approx 78'54 \text{ cm}^2$$

$$A_{(r=3\text{cm})} = \pi \cdot 3^2 \approx 28'27 \text{ cm}^2$$

$$A_{\text{área circular}} = \pi \cdot (R^2 - r^2) = \pi \cdot (5^2 - 3^2) \approx 50'27 \text{ cm}^2$$

28)



A área de um setor circular de amplitude "n", calcula-se utilizando a proporcionalidade direta, ou seja, resulte: $A_{\text{setor}} = \frac{n \cdot \pi \cdot R^2}{360}$

Amplitude

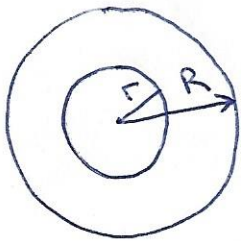
Área

$$360^\circ \longrightarrow \text{Área círculo} = \pi \cdot R^2$$

$$120^\circ \longrightarrow \text{Área setor}$$

$$A_{\text{setor}} = \frac{120 \cdot \pi R^2}{360} = \frac{120 \cdot \pi \cdot 20^2}{360} \approx 418'88 \text{ cm}^2$$

29)



$$A_R = \pi \cdot R^2 \quad (\text{área círculo maior de raio } R)$$

$$A_r = \pi \cdot r^2 \quad (\text{área círculo menor de raio } r)$$

$$A_{\text{área circular}} = \pi \cdot (R^2 - r^2) = \frac{\pi R^2}{2}$$

$$\text{Como } \pi \cdot (R^2 - r^2) = \frac{\pi R^2}{2} \Leftrightarrow (R^2 - r^2) = \frac{R^2}{2} \Leftrightarrow (\text{condição enunciado})$$

$$\Leftrightarrow 2(R^2 - r^2) = R^2 \Leftrightarrow 2R^2 - 2r^2 = R^2 \Leftrightarrow R^2 = 2r^2 \Leftrightarrow$$

$$\Leftrightarrow R = \sqrt{2}r \Leftrightarrow$$

$$\boxed{\frac{R}{r} = \sqrt{2}}$$