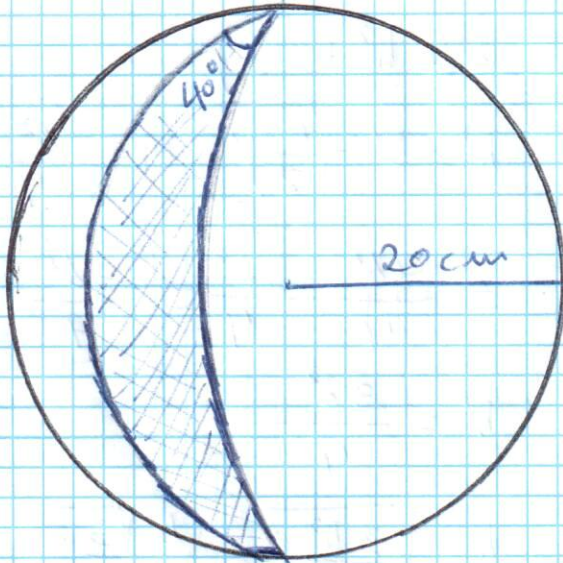


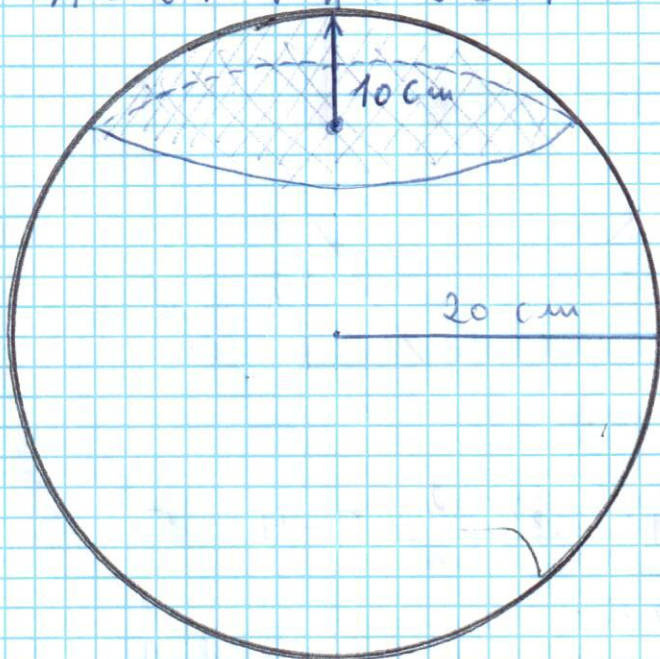
(17) a) Área huso esférico de 40°



$$A = \frac{4\pi r^2 \cdot 40}{360} = \frac{4 \cdot 3.14 \cdot 20^2 \cdot 40}{360} = \underline{\underline{558.12 \text{ cm}^2}}$$

b) Casquete esférico altura 10 cm

$$A = 2\pi \cdot r \cdot h = 2 \cdot 3.14 \cdot 20 \cdot 10 = \underline{\underline{1256 \text{ cm}^2}}$$



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(18)

Hallamos el área total y la dividimos entre 12

$$A = 4\pi \cdot r^2 = 4 \cdot 3.14 \cdot 7.5^2 = 706.5 \text{ cm}^2$$

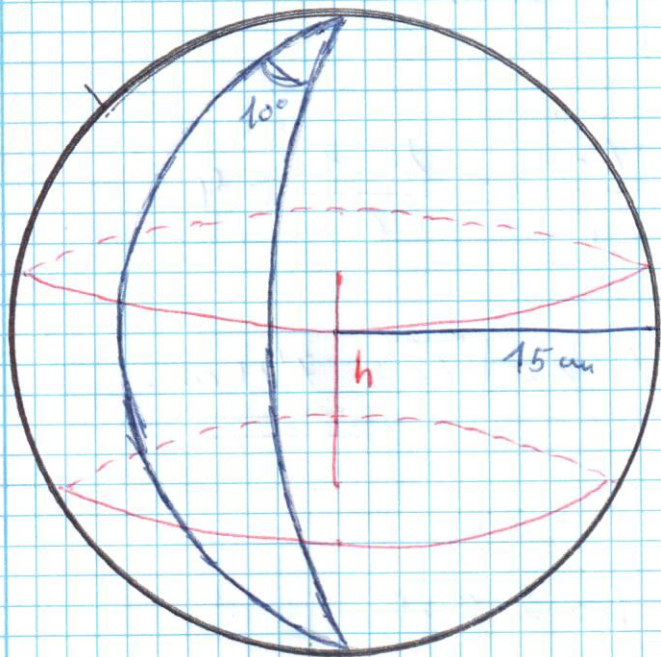
$$\text{Área de un gajo} = \frac{A_{\text{total}}}{12} = \frac{706.5}{12} = \underline{\underline{58.9 \text{ cm}^2}}$$

Otra forma

Un gajo es un huso esférico de $\frac{360}{12} = 30^\circ$

$$A = \frac{4 \cdot \pi \cdot r^2 \cdot 30}{360} = \frac{4 \cdot 3.14 \cdot 7.5^2 \cdot 30}{360} = \underline{\underline{58.9 \text{ cm}^2}}$$

(19)



$$A_{\text{huso}} = \frac{4 \cdot \pi \cdot r^2 \cdot d}{360}$$

$$A_{\text{zona}} = 2\pi r h$$

$$A_{\text{huso}} = A_{\text{zona}}$$

Si las áreas son iguales

$$\frac{4 \cdot \pi \cdot r^2 \cdot d}{360} = 2 \cdot \pi \cdot r \cdot h$$

$$h = \frac{2 \cdot \pi \cdot r^2 \cdot d}{360 \cdot \pi \cdot r} = \frac{2 \cdot r \cdot d}{360}$$

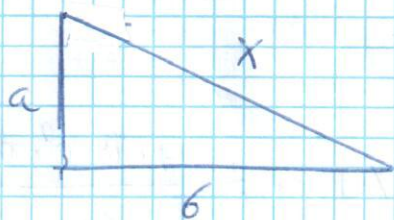
$$h = \frac{2 \cdot 15 \cdot 10}{360} = 0'83 \text{ cm.}$$

si el radio fuera 30 cm

$$h = \frac{2 \cdot 30 \cdot 10}{360} = 1'6 \text{ cm}$$

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(60)



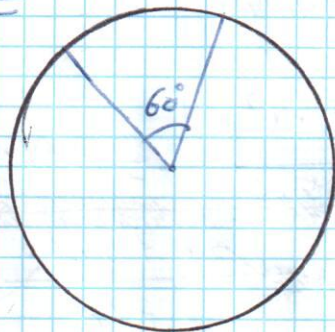
$$A = 12 \text{ cm}^2$$

$$A = \frac{6 \cdot a}{2} \quad // \quad a = \frac{A \cdot 2}{6} = \frac{12 \cdot 2}{6} = 4$$

$$x^2 = 6^2 + 4^2 = 52 \quad // \quad x = \sqrt{52} = \underline{\underline{7'21 \text{ cm.}}}$$

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(76)



$$L = 2 \cdot \pi \cdot R$$

$$12 \cdot \pi = 2 \cdot \pi \cdot R$$

$$R = \frac{12 \cdot \pi}{2 \cdot \pi} = 6$$

$$A = \frac{\pi \cdot R^2 \cdot 60}{360} = \frac{3'14 \cdot 6^2 \cdot 60}{360} = \underline{\underline{18'84 \text{ cm}^2}}$$