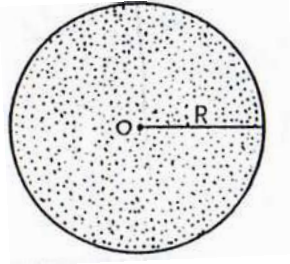




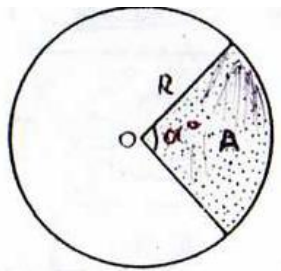
ÁREA DE REGIONES CIRCULARES

1. AREA DE CIRCULO (A)



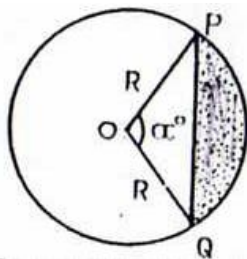
$$A = \pi R^2$$

2. SECTOR CIRCULAR (A)



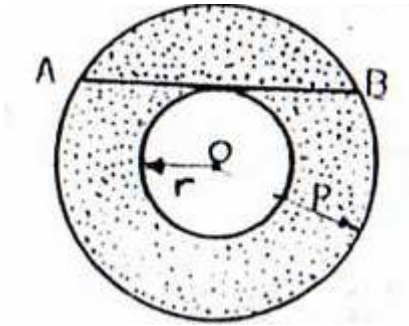
$$A = \frac{\pi R^2 \times \alpha^\circ}{360^\circ}$$

3. SEG. CIRCULAR (A_{PQ})



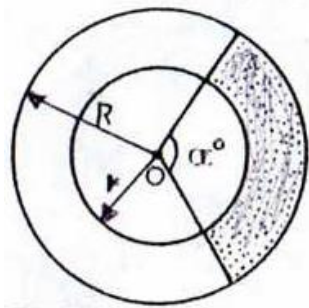
$$A_{(PQ)} = \frac{\pi R^2 \times \alpha^\circ}{360^\circ} - \frac{R^2}{2} \text{Sen} \alpha$$

4. CORONA CIRCULAR (A_C)



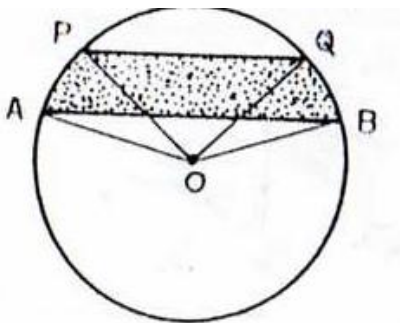
$$A_C = \pi(R^2 - r^2) = \frac{\pi}{4}(AB)^2$$

5. TRAPECIO CIRCULAR (A)



$$A = \frac{\alpha \pi}{360^\circ} (R^2 - r^2)$$

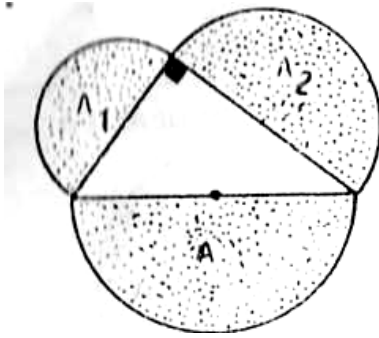
6. FAJA CIRCULAR (A_F)



$$A_F = (A_{(AB)} - A_{(PQ)})$$

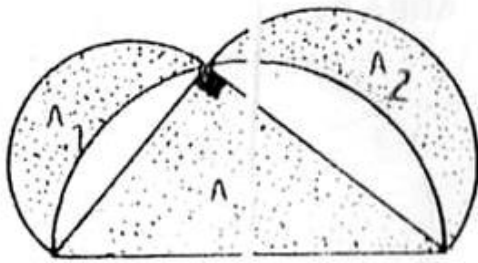
PROPIEDADES

1.



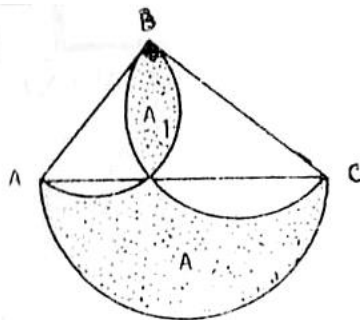
$$A = A_1 + A_2$$

2. LUNULAS DE HIPÓCRATES



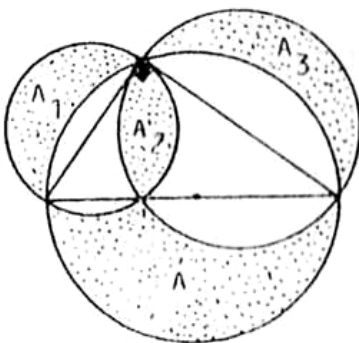
$$A = A_1 + A_2$$

3.



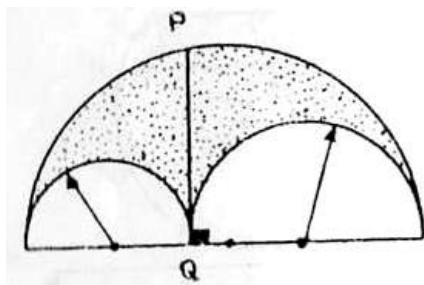
$$A = A_1 + A_{ABC}$$

4.



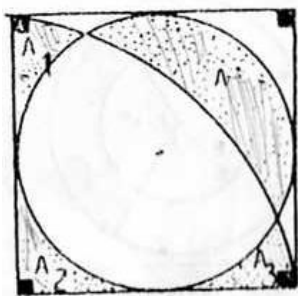
$$A = A_1 + A_2 + A_3$$

5. AREA SOMBREADA (A_s)



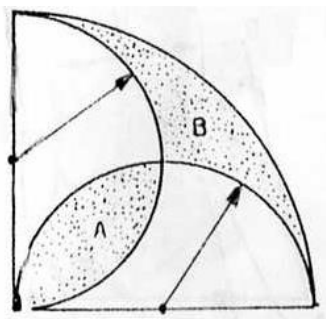
$$A = \frac{PQ^2}{4} \times \pi$$

6.



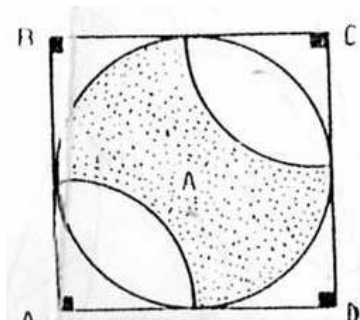
$$A = A_1 + A_2 + A_3$$

7.

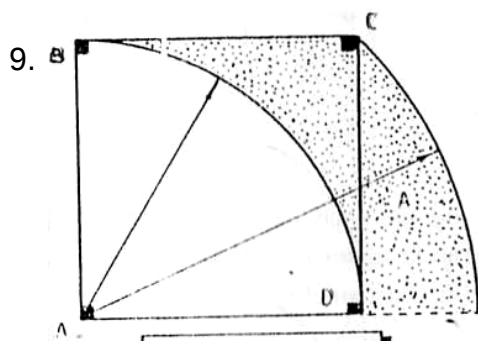


$$A = B$$

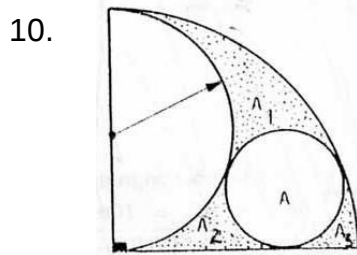
8.



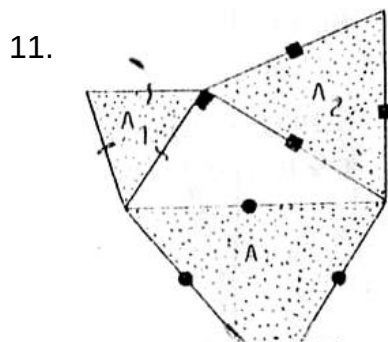
$$A_s = \frac{1}{2} [A_{(ABCD)}]$$



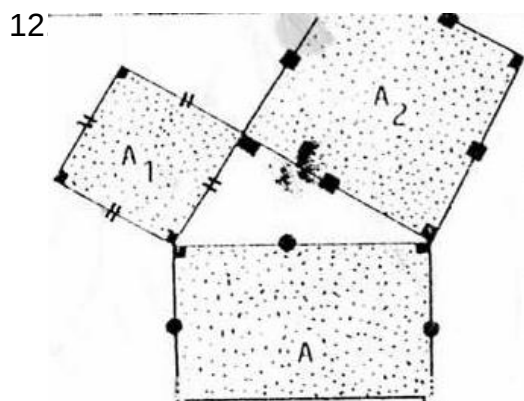
$$A_S = \frac{1}{2} [A_{(ABCD)}]$$



$$A = A_1 + A_2 + A_3$$



$$A = A_1 + A_2$$

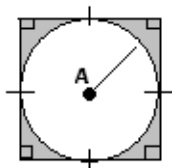


$$A = A_1 + A_2$$

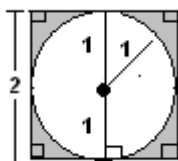
EJEMPLOS

1. Calcular el área sombreada

- A) π
- B) $2 + \pi$
- C) $\pi - 2$
- D) $4 - \pi$
- E) $\pi + 1$



Resolución:



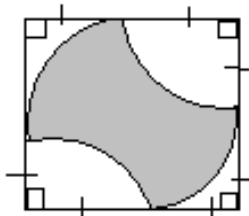
$$A_s = A_{\square} - A_{\text{cuarto}}$$

$$A_s = (2)^2 - \pi (1)^2$$

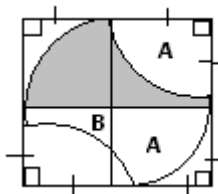
$$A_s = 4 - \pi$$

2. Calcular el área sombreada:

- A) $\frac{a^2}{2}$
- B) $\frac{a^2}{4}$
- C) $\frac{a^2}{3}$
- D) $\frac{3a^2}{4}$
- E) $\frac{a^2}{5}$



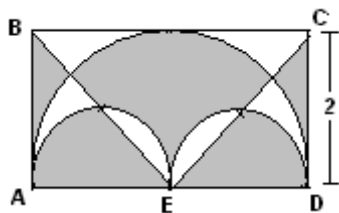
Resolución:



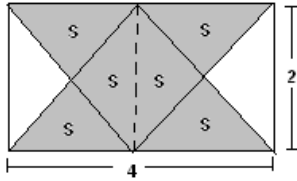
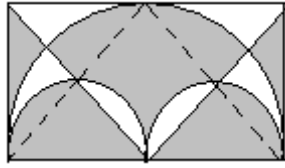
$$AS = \frac{A}{2} = \frac{a^2}{2}$$

3. Hallar el área de la región sombreada, si $AE = ED$.

- A) 2
- B) 4
- C) 5
- D) 5π
- E) 6



Resolución:



Quedó sombreado los:

$$\frac{6S}{8S} \left(\frac{\text{Área del rectángulo}}{4} \right) = \frac{3}{4} (4 \times 2)$$

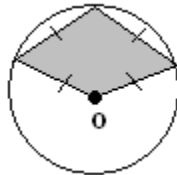
$$= 6u^2$$

CONSTRUYENDO

MIS CONOCIMIENTOS

1. Hallar el área del rombo sombreado, si el radio del círculo es 8 m.

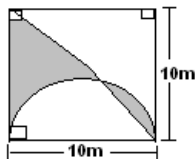
- A) $32\sqrt{3} \text{ m}^2$
 B) $16\sqrt{3} \text{ m}^2$
 C) $8\sqrt{3} \text{ m}^2$
 D) $64\sqrt{3} \text{ m}^2$
 E) $4\sqrt{3} \text{ m}^2$



Resolución:

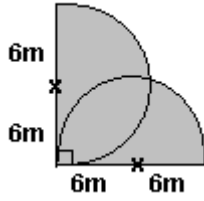
2. Hallar el área de la región sombreada.

- A) 15 m^2 B) 25 m^2 C) 30 m^2 D) 100 m^2 E) 50 m^2



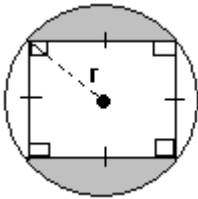
Resolución

3. Hallar el área sombreada
 A) $18(2 + \pi)m^2$ B) $9(2 + \pi)m^2$ C) $4(1 + \pi)m^2$ D) $6(2 + \pi)m^2$
 E) N.A.



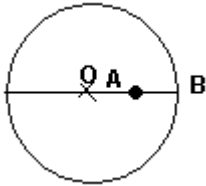
Resolución:

4. Hallar el área sombreada
 A) $r^2 (\frac{\pi}{2} - 1)$ B) $(\frac{\pi}{2} - r)$ C) $r (\frac{\pi}{3} - 1)$ D) $r(\pi - 2)$ E) N.A.



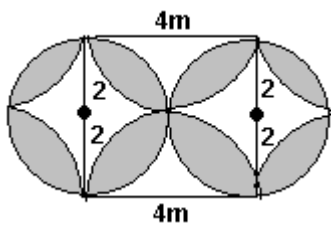
Resolución

5. Si $OB = 5m$; $AB = 3m = CD$. Hallar el área de la región sombreada
 A) $12,5 m^2$ B) $10,2 m^2$ C) $25 m^2$ D) $14,5 m^2$ E) $13,5 m^2$



Resolución

6. Hallar el área de la región sombreada.
 A) $16(\pi - 2)$ B) $8(\pi - 1)$ C) $9(\pi - 1)$ D) $(\pi - 2)$ E) $\pi + 8$

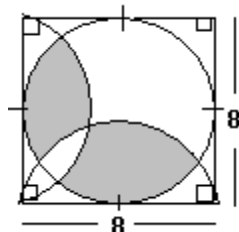


Resolución:

REFORZANDO MIS CAPACIDADES

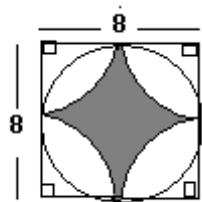
1. Calcular el área de la región sombreada.

- A) 4π
B) 8π
C) 6π
D) 64π
E) 32π



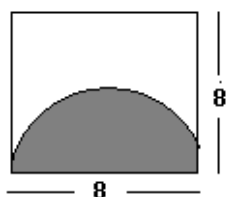
2. Calcular el área de la región sombreada.

- A) $32(4 - \pi)$
B) $16(4 - \pi)$
C) $64(4 - \pi)$
D) $8(4 - \pi)$
E) N.A.



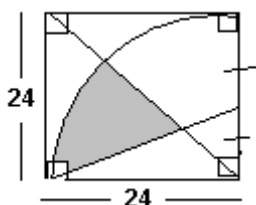
3. Hallar el área de la región sombreada:

- A) $8(3\pi - 4)$
B) $16(2\pi - 3)$
C) $64(\pi - 3)$
D) $8(\pi - 4)$
E) N.A.



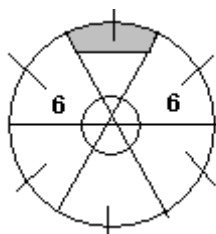
4. Calcular el área de la región sombreada.

- A) $24(\pi - 3)$
B) $72\pi - 96$
C) $32\pi - 3$
D) $12(\pi - 3)$
E) N.A.



5. Hallar el área de la región sombreada.

- A) $12\pi - 18\sqrt{3}$
B) $\pi - 18\sqrt{2}$
C) $6\pi - 9\sqrt{3}$
D) $3(\pi - \sqrt{3})$
E) $5(\pi - \sqrt{2})$



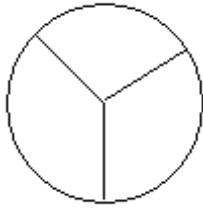
6. ¿Cuánto mide el área de la región sombreada, si el lado del cuadrado mide $2\sqrt{3}$?

- A) $12 + 4\pi - 12\sqrt{3}$
B) $4\pi - 12\sqrt{3}$
C) $12 + 3\pi - \sqrt{3}$
D) $8 + 2\pi - 6\sqrt{3}$
E) N.A.



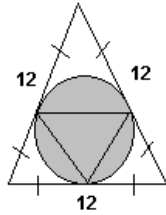
7. Calcular el área de la región sombreada.

- A) $18(2\pi - 3\sqrt{3})$
 B) $12(2\pi - 3\sqrt{3})$
 C) $6(2\pi - 3\sqrt{3})$
 D) $24\pi + 36\sqrt{3}$
 E) N.A.



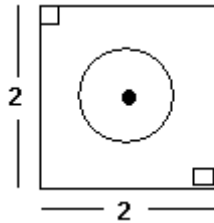
8. Calcular el área de la región sombreada.

- A) $18(2\pi - \sqrt{3})$
 B) $9(2\pi - \sqrt{2})$
 C) $7(2\pi - \sqrt{3})$
 D) $12(2\pi - \sqrt{3})$
 E) N.A.



9. ¿Cuánto mide el área de la región sombreada?

- A) $(\sqrt{2}\pi - \pi - 2)$
 B) $4(\sqrt{2}\pi - \pi - 1)$
 C) $(\sqrt{2}\pi - \pi - 3)$
 D) $2(\sqrt{2}\pi - \pi - 2)$
 E) N.A.



10. ¿Cuánto mide el área de la región sombreada?

- A) $32(\pi - 2)$
 B) $16(\pi - 2)$
 C) $64(\pi - 2)$
 D) $8(\pi - 2)$
 E) N.A.

