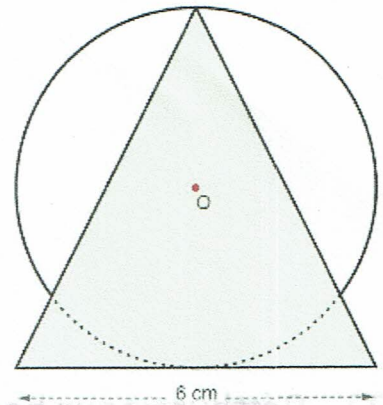


18. Flatarmál þríhyrningsins er 18 cm^2 .
Reiknaðu út flatarmál hringsins.



$$F_0 = \pi \cdot r^2$$

$$F_{\Delta} = 18 \text{ cm}^2 = \frac{g \cdot h}{2}$$

$$g = 6 \text{ cm}$$

$$18 \text{ cm}^2 = \frac{6 \text{ cm} \cdot h}{2}$$

$$3 \text{ cm} \cdot h = 18 \text{ cm}^2$$

$$h = \frac{18 \text{ cm}^2}{3 \text{ cm}} = 6 \text{ cm}$$

$$F_0 = \pi \cdot (3 \text{ cm})^2 = \underline{\underline{28,27 \text{ cm}^2}}$$

$$= \underline{\underline{9\pi \text{ cm}^2}}$$

þvermál hrings

$$d = 6 \text{ cm}$$

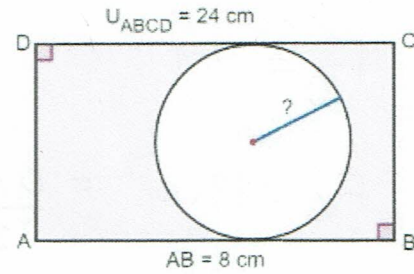
þá er $r = 3 \text{ cm}$?

$$\text{hæð} = \text{þvermál} = 6 \text{ cm}$$

$$\text{radius} = \frac{\text{þvermál}}{2} = \frac{6 \text{ cm}}{2}$$

$$r = 3 \text{ cm}$$

22. Réttthyrningur þessi hefur ummálið 24 cm. Lengd hans er 8 cm. Reiknaðu flatarmál hringins.



$$U = 2 \cdot \text{lengd} + 2 \cdot \text{breidd}$$

$$24 \text{ cm} = 2 \cdot 8 \text{ cm} + 2 \cdot \text{breidd}$$

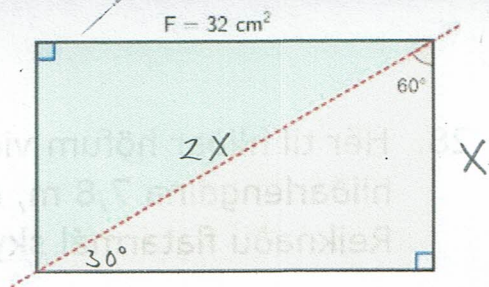
$$2 \cdot \text{breidd} = 24 \text{ cm} - 16 \text{ cm} = 8 \text{ cm}$$

$$\text{breidd} = \frac{8 \text{ cm}}{2} = 4 \text{ cm}$$

Þá er radius $\frac{4 \text{ cm}}{2} = 2 \text{ cm}$ vegna þess að breidd = þvermál.

$$F_0 = \pi \cdot r^2 = \pi \cdot (2 \text{ cm})^2 = \pi \cdot 4 \text{ cm}^2 = \underline{\underline{12,57 \text{ cm}^2}}$$

24. Flatarmál þessa rétthyrnings er 32 cm^2 . Hornalína myndar 30° og 60° horn við hliðarlínur. Reiknaðu út hliðarlengdir hans.



$$F = l \cdot b$$

$$F = 32 \text{ cm}^2$$

$$l \cdot b = F$$

$$\sqrt{3} \cdot X \cdot X = 32 \text{ cm}^2$$

$$X^2 = \frac{32 \text{ cm}^2}{\sqrt{3}}$$

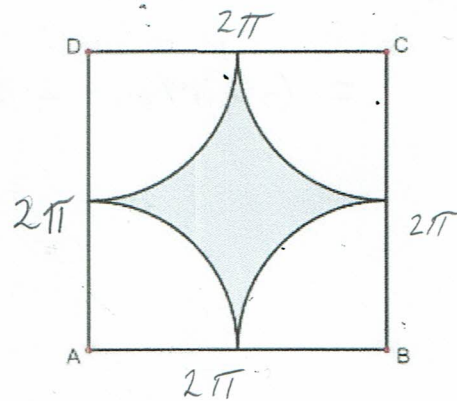
$$X^2 = 18,47 \text{ cm}^2$$

$$X = \pm 4,30 \text{ cm}$$

Breiddin er 4,3 cm og

lengdin er $\sqrt{3} \cdot 4,3 \text{ cm} = \underline{\underline{7,44 \text{ cm}}}$

27. Ferningur hefur hliðarlengdina 2π .
 a) Reiknaðu flatarmál litada hlutans.
 b) Reiknaðu ummál litada hlutans.



$$\text{radius} = \frac{\text{þvermál}}{2} = \frac{2\pi}{2} = \pi$$

- a) Litada svæðið er ferningur mínus hringur.
 það er við sjáum $4 \times \frac{1}{4}$ hringur = 1 hringur

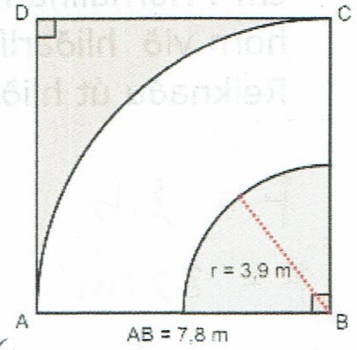
$$F = F_{\square} - F_{\circ} = l \cdot b - \pi \cdot r^2 = 2\pi \cdot 2\pi - \pi \cdot \pi^2 = \underline{\underline{4\pi^2 - \pi^3}}$$

$$= \underline{\underline{8,47}}$$

- b) Ummál litada hlutans er jafnt ummáli hringis.

$$U = 2 \cdot \pi \cdot r = 2 \cdot \pi \cdot \pi = \underline{\underline{2\pi^2}} \approx \underline{\underline{19,74}}$$

28. Hér til hliðar höfum við saman ferning, með hliðarlengdina 7,8 m, og 1/4 úr hring. Reiknaðu flatarmál skyggða svæðisins.



Flatarmál skyggða svæðis er

Ferningur mínus hvíta svæðið plús skyggður

1/4 litli hringur.

$$\frac{7,8}{2} = 3,9$$

$$F = F_{\square} - \frac{F_{\circ}}{4}_{\text{stór}} + \frac{F_{\circ}}{4}_{\text{litill}}$$

$$= l \cdot b - \frac{\pi r^2}{4}_{\text{stór}} + \frac{\pi \cdot r^2}{4}_{\text{litill}}$$

$$= 7,8\text{m} \cdot 7,8\text{m} - \frac{\pi \cdot (7,8\text{m})^2}{4} + \frac{\pi \cdot (3,9\text{m})^2}{4} =$$

$$= 60,84\text{m}^2 - 47,78\text{m}^2 + 11,95\text{m}^2 = \underline{\underline{25,00\text{m}^2}}$$

