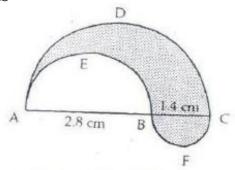


Question 49:



Diameter AC = 2.8 + 1.4

= 4.2 cm

Radius = 
$$\frac{4.2}{2}$$
  
= 2.1 cm

Length of semi-circle ADC =  $\pi r_1 = \pi \times 2.1 = 2.1\pi$  cm

Diameter AB = 2.8 cm

Radius  $r_2 = 1.4$  cm

Length of semi-circle AEB =  $\pi r_2 = 1.4 \pi$  cm

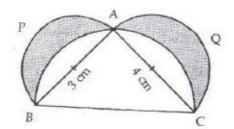
Diameter BC = 1.4 cm

Radius 
$$r_3 = \frac{1.4}{2} = 0.7 \text{ cm}$$

Length of semi - circle BFC =  $\pi \times 0.7 = 0.7 \pi$  cm  $\therefore$  Perimeter of shaded region =  $2.1 \pi + 1.4 \pi + 0.7 \pi = 4.2 \pi$  cm

$$=4.2 \times \frac{22}{7} = 13.2 \text{ cm}$$

Question 50:



Area of shaded region = Area of  $\triangle$  ABC + Area of semi-circle APB + Area of semi circle AQC - Area of semicircle BAC

Now, Area of a 
$$\triangle ABC = \frac{1}{2} \times 3 \times 4 = 6 \text{ cm}^2 - -(1)$$

Area of semi – drde APB = 
$$\frac{1}{2}\pi r^2 = \frac{1}{2}\pi \times \left(\frac{3}{2}\right)^2 = \frac{9}{8}\pi - -(2)$$

Area of semi – drde AQC = 
$$\frac{1}{2}\pi r_2^2$$

$$= \frac{1}{2}\pi \left(\frac{4}{2}\right)^2 = 2\pi \text{ cm}^2 - - - - (3)$$

Further in ∆ ABC, ∠ A = 90°

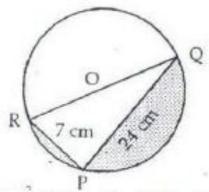
$$BC^2 = AB^2 + AC^2 = 9 + 16 = 25$$

Area of semi – drdeBAC = 
$$\frac{1}{2}\pi \left(\frac{5}{2}\right)^2 = \frac{25}{8}\pi - - (4)$$

Adding (1), (2), (3) and subtracting (4)

:. Area of shaded region = 
$$6 + \frac{9}{8}\pi + 2\pi - \frac{25}{8}\pi$$
  
=  $6 + \frac{25}{8}\pi - \frac{25}{8}\pi = 6 \text{ cm}^2$ 

Question 51:



In  $\triangle$  PQR,  $\angle$  P = 90°, PQ = 24 cm, PR = 7 cm

:. QR = 25cm

Area of semicircle

$$= \frac{1}{2} \times \pi \times \left(\frac{25}{2}\right)^{2}$$

$$= \frac{1}{2} \times 3.14 \times \frac{25 \times 25}{4} \text{ cm}^{2}$$

$$= \frac{625 \times 3.14}{8} = 245.31 \text{ cm}^{2}$$

Area of  $\triangle PQR = \frac{1}{2} \times 7 \times 24 \text{ cm}^2 = 84 \text{ cm}^2$ 

: Shaded area = 245.31 - 84 = 161.31 cm<sup>2</sup>

\*\*\*\*\*\*\* END \*\*\*\*\*\*