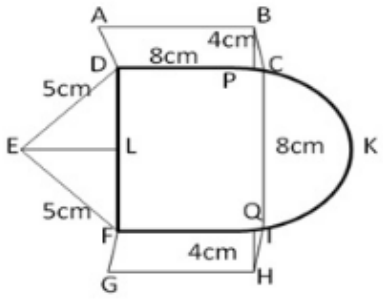
Question 46:



Given BP $\perp$ CD, HQ $\perp$ FI and EL $\perp$ DF,

DC=8 cm, BP = HQ = 4 cm and DE = EF = 5 cm

Area of parallelogram ABCD = BP $\times$ DC

$= 4 \times 8 = 32 \text{ cm}^2$

Area of parallelogram FGHI = FI $\times$ HQ

$= 8 \times 4 = 32 \text{ cm}^2$

Area of semicircle CKI $= \frac{1}{2}\pi r^2$

$= \frac{1}{2} \times 3.14 \times (4)^2 = 25.12 \text{ cm}^2$

Area of isosceles $\Delta DEF = \frac{1}{4} b\sqrt{4a^2 - b^2}$

$= \frac{1}{4}(8)\sqrt{4(5)^2 - (8)^2} = 2\sqrt{100 - 64}$

$= 2\sqrt{36} = 12 \text{ cm}^2$

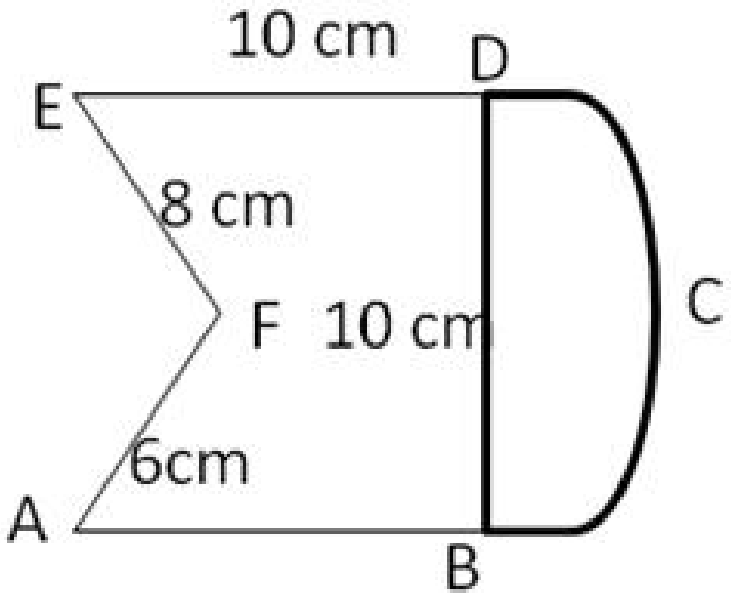
Area of square CDFI $= (\text{side})^2 = (8)^2 = 64 \text{ cm}^2$

Area of whole figure = area of $||^{gm}$ ABCD + area of $||^{gm}$ FGHI
+ area of semi-circle CKI + area of ΔDEF
+ area of square CDFI

$= (32+32+25.12+12+64) \text{ cm}^2$

$= 165.12 \text{ cm}^2$

Question 47:

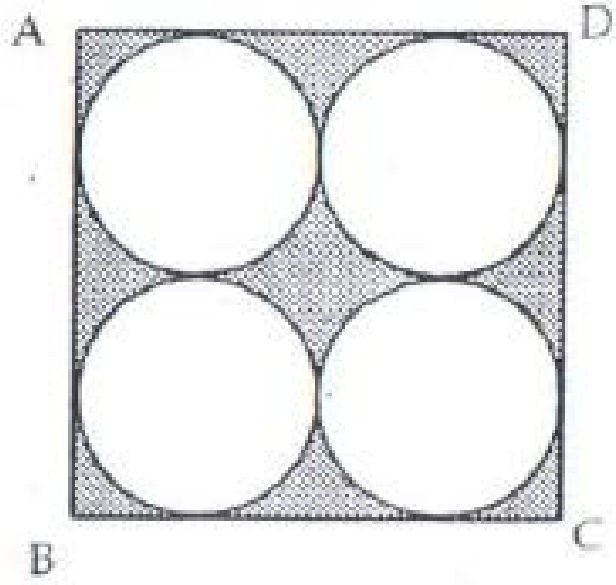


Area of region ABCDEFA = area of square ABDE + area of semi circle BCD - area of ΔAFE

$$= \left[10 \times 10 + \frac{1}{2} \times 3.14 \times 5 \times 5 - \frac{1}{2} \times 6 \times 8\right] cm^2$$

$$= [100 + 39.25 - 24] cm^2 = 115.25 \ cm^2$$

Question 48:



Side of the square ABCD = 14 cm

Area of square ABCD = 14 × 14 = 196 cm^2

Radius of each circle = 14/4 = 3.5 cm

Area of the circles = 4 × area of one circle

$$= 4 \times \pi (3.5)^2$$

$$= 4 \times \frac{22}{7} \times 3.5 \times 3.5$$

$$= 154 \ cm^2$$

Area of shaded region = Area of square - area of 4 circles

= 196 - 154 = 42 cm^2

********** END **********