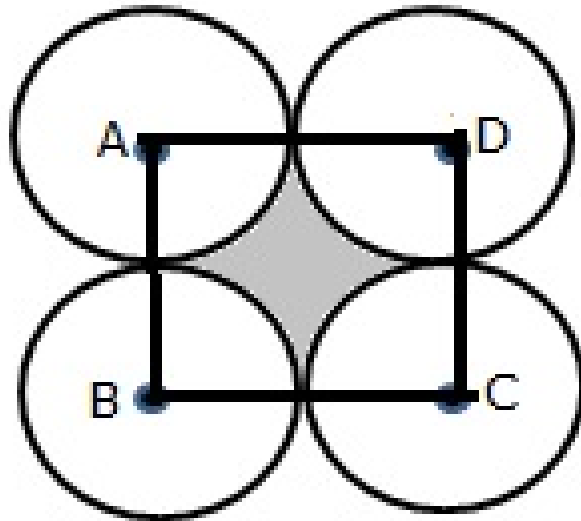




Question 40:



Let A, B, C, D be the centres of these circles

Join AB, BC, CD and DA

Side of square = 10 cm

Area of square ABCD

$$= (10 \times 10) \text{ cm}^2$$

$$= 100 \text{ cm}^2$$

$$\text{Area of each sector} = \left(\pi^2 \times \frac{\theta}{360} \right) = 3.14 \times 5 \times 5 \times \frac{90}{360}$$

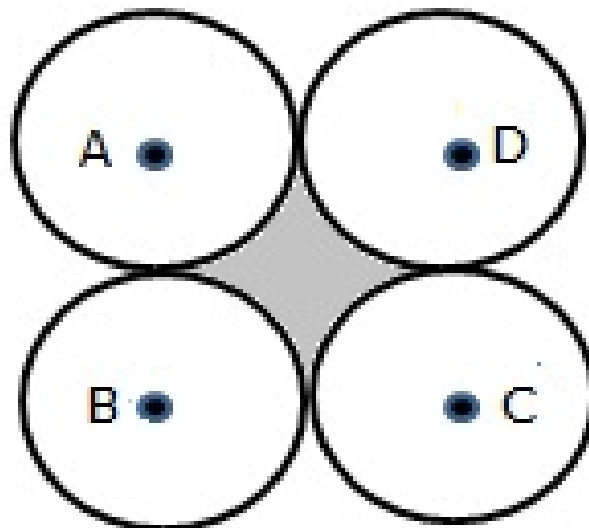
$$= 19.625 \text{ cm}^2$$

Required area = [area of sq. ABCD - 4(area of each sector)]

$$= (100 - 4 \times 19.625) \text{ cm}^2$$

$$= (100 - 78.5) = 21.5 \text{ cm}^2$$

Question 41:



Required area = [area of square - areas of quadrants of circles]

Let the side = 2a unit and radius = a units

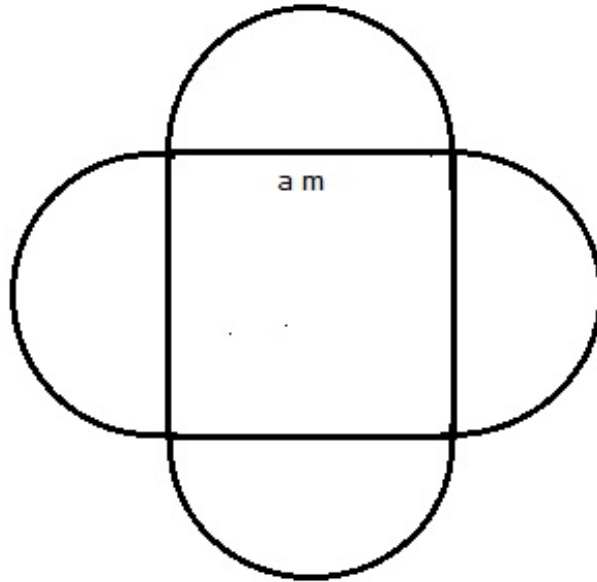
Area of square = (side \times side) = $(2a \times 2a)$ sq. units = $4a^2$ sq.units

Area of quadrant = $\frac{1}{4} \pi r^2$

Area of 4 quadrants = $4 \times \frac{1}{4} \pi r^2 = \pi r^2 = \frac{22}{7} \times a \times a = \frac{22}{7} a^2$ sq.unit

Required area = $\left(4a^2 - \frac{22}{7} a^2\right)$ sq. unit = $\frac{6a^2}{7}$

Question 42:



Let the side of square = a m

Area of square = $(a \times a)$ cm = $a^2 m^2$

$$\therefore a^2 = 1600$$

$$a = \sqrt{1600} \text{ m}$$

$$a = 40 \text{ m}$$

Side of square = 40 m

Therefore, radius of semi circle = 20 m

Area of semi circle = $\frac{1}{2} \pi r^2 = \left(\frac{1}{2} \times 3.14 \times 20 \times 20\right) m^2$
= $628 m^2$

Area of four semi circles = $(4 \times 628) m^2 = 2512 m^2$

Cost of turfing the plot of area $1 m^2$ = Rs. 1.25

Cost of turfing the plot of area $2512 m^2$ = Rs. (1.25×2512)
= Rs. 3140

***** END *****