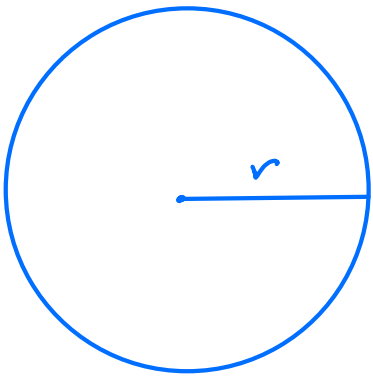
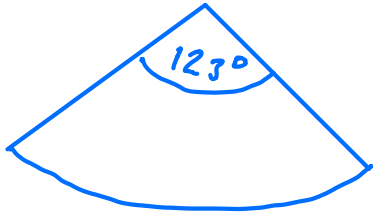


Circle Area and Circumference



$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r$$



$$\text{Area of sector} = 100 \text{ cm}^2$$

Find perimeter

$$100 = \frac{123}{360} \pi r^2$$

$$360 \times 100 = 123 \pi r^2$$

$$\frac{360 \times 100}{123 \pi} = r^2$$

$$\sqrt{\frac{36000}{123 \pi}} = r$$

$$r = 9.65 \text{ cm}$$

$$\text{Perimeter} = r + r + \frac{123}{360} \times 2\pi r$$

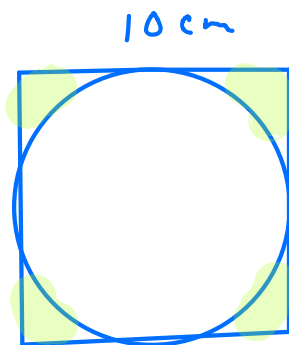
$$= 9.65 + 9.65 + \frac{123}{360} \times 2 \times \pi \times 9.65$$

$$= 40.0 \text{ cm}$$

Ex 2

A circle fits inside a square

Find the shaded area



Area of square

$$10 \times 10 = 100 \text{ cm}^2$$

Area of circle

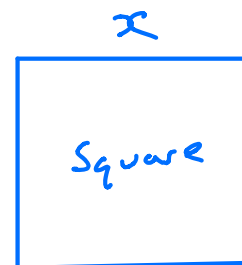
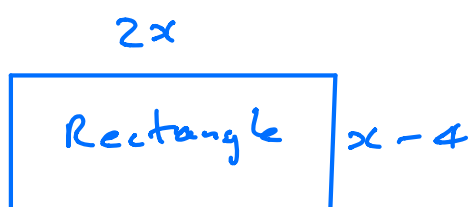
$$= \pi r^2 = \pi \times 5^2$$

$$= 78.5 \text{ cm}^2$$

$$\text{Shaded area} = 100 - 78.5$$

$$= 21.5 \text{ cm}^2$$

Ex 3



Rectangle and square have same area

Find perimeter of rectangle

$$2x(x-4) = x^2$$

$$2x^2 - 8x = x^2$$

$$2x^2 - x^2 - 8x = 0$$

$$x^2 - 8x = 0$$

$$x(x - 8) = 0$$

$$x = 0 \quad \text{or} \quad x = 8$$

x

✓

$$\text{Perimeter} = 16 + 4 + 16 + 4 = 40\text{cm}$$
