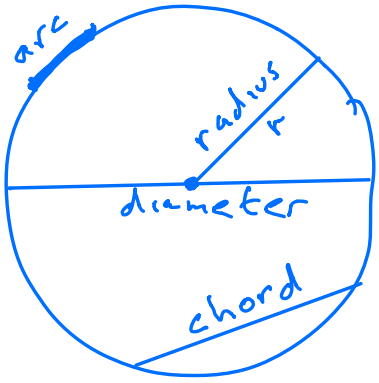
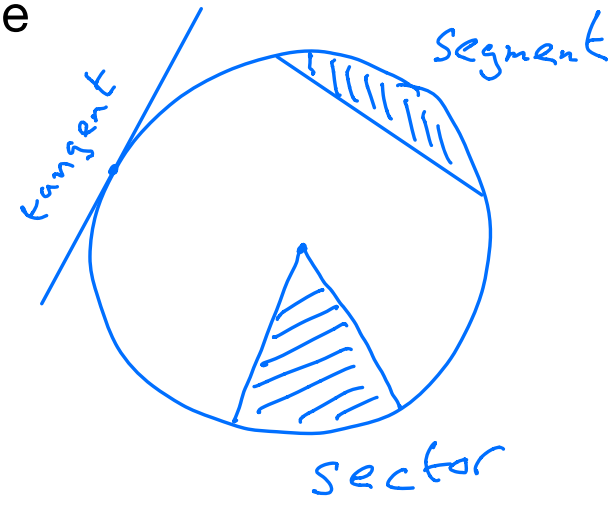
# Circle




Area of circle $A = \pi r^2$

Circumference of circle $C = 2\pi r$

Examples

1) 


$A = \pi r^2 = \pi \times 6^2 = 113.1\ cm^2$

$C = 2\pi r = 2 \times \pi \times 6 = 37.7\ cm$

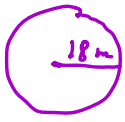
2) 


diameter $= 10m \Rightarrow$ radius $= 5m$

$A = \pi r^2 = \pi \times 5^2 = 78.5\ m^2$

$C = 2\pi r = 2 \times \pi \times 5 = 31.4\ m$

Exercise Find area and circumference

1) 


$A = \pi r^2 = \pi \times 18^2 = 1017.9\ m^2$

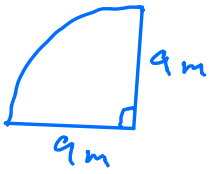
$C = 2\pi r = 2 \times \pi \times 18 = 113.1\ m$

2 


$A = \pi r^2 = \pi \times 8^2 = 201.1\ cm^2$

$C = 2\pi r = 2 \times \pi \times 8 = 50.3\ cm$

Ex 3

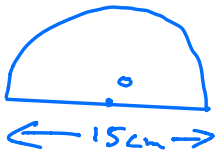



$$\text{Area} = \frac{\pi r^2}{4} = \frac{\pi \times 9^2}{4} = 63.6\,m^2$$

$$\text{Perimeter} = \frac{2\pi r}{4} + r + r$$

$$= \frac{2 \times \pi \times 9}{4} + 9 + 9 = 32.1\,m$$

Ex 4




$$\text{diameter} = 15\,cm \Rightarrow \text{radius} = 7.5\,cm$$

$$\text{Area} = \frac{\pi r^2}{2} = \frac{\pi \times 7.5^2}{2} = 88.4\,cm^2$$

$$\text{Perimeter} \quad \frac{2\pi r}{2} + 2r$$

$$= \frac{2 \times \pi \times 7.5}{2} + 15 = 38.6\,cm$$

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