

Circle: Finding the Diameter or Radius**1. FINDING THE DIAMETER OR RADIUS**

If we are given the circumference of a circle, we are able to find its diameter and its radius.

$$\text{diameter} = \text{circumference} \div \pi \quad \text{radius} = \text{diameter} \div 2$$

$$d = \frac{C}{\pi} \quad r = \frac{d}{2}$$

Remember: $\pi = 3.14$

2. EXAMPLE

Calculate the diameter and the radius of a circle if its circumference is 62 cm.

$$\begin{aligned} d &= \frac{C}{\pi} \\ &= \frac{62 \text{ cm}}{3.14} \\ &= 19.745223 \text{ cm} \\ &= 19.75 \text{ cm} \end{aligned}$$

Therefore, the diameter is 19.75 cm.

The radius is:

$$\begin{aligned} r &= \frac{d}{2} \\ &= \frac{19.75 \text{ cm}}{2} \\ &= 9.875 \text{ cm} \\ &= 9.88 \text{ cm} \end{aligned}$$

3. CALCULATE THE DIAMETER & RADIUS

a) $C = 113.04 \text{ mm}$

b) $C = 87.92 \text{ m}$

c) $C = 138.16 \text{ m}$

d) $C = 62.8 \text{ mm}$