

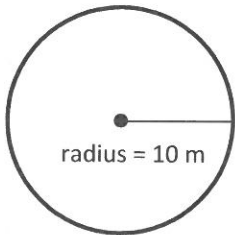
The Perimeter of a Circle: Circumference

The perimeter of a circle has a special name – it is called the **circumference**. It gets a special name (and its own formula) because you cannot (easily) measure the 'side' of a circle with a ruler. This is where the special number π comes in.

The circumference of a circle is slightly more than 6 times the length of the radius. The formula for the circumference of a circle is $C = 2\pi r$. The symbol π is called **Pi** and represents the number 3.1415926..... Your calculator should have a Pi symbol on one of its buttons; this is the button you'll use when a formula has π in it.

Example 3

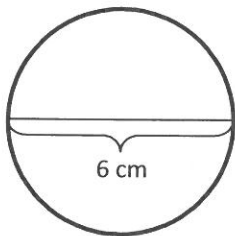
Determine the circumference of the circle shown below.



$$\begin{aligned} \text{Circumference} &= 2\pi \times \text{radius} \\ C &= 2\pi r \\ C &= 2\pi \times 10\text{ m} \\ C &= 62.83\text{ m} \end{aligned}$$

Example 4

Determine the circumference of the circle shown below. (Hint: You have been given the *diameter* of the circle: The diameter is twice as long as the radius – you need to divide the diameter by 2 before you use the circumference formula.)



$$\begin{aligned} \text{Radius} &= \frac{1}{2} \text{ diameter} \\ \text{Radius} &= \frac{1}{2} \times 6\text{ cm} \\ \text{Radius} &= 3\text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Circumference} &= 2 \cdot \pi \cdot \text{radius} \\ C &= 2 \times \pi \times 3\text{ cm} \\ C &= 18.85\text{ cm} \end{aligned}$$