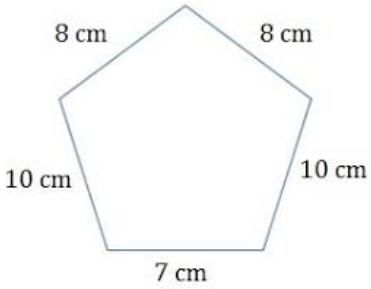
MTH1W

Perimeter

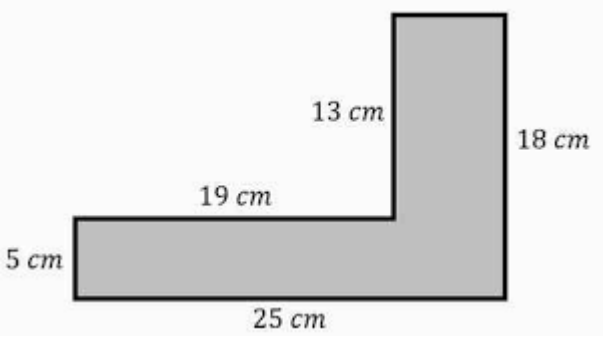
The **perimeter** is the distance around the entire outside of it.
We calculate perimeter by adding up all the sides of the shape.

$$P = \Sigma(sides)$$

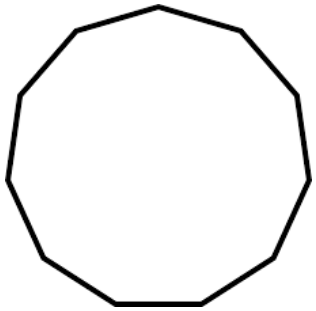
1. Calculate the perimeter of this pentagon.



2. Calculate the perimeter of this shape.
[One side length is missing. You have to calculate it.]



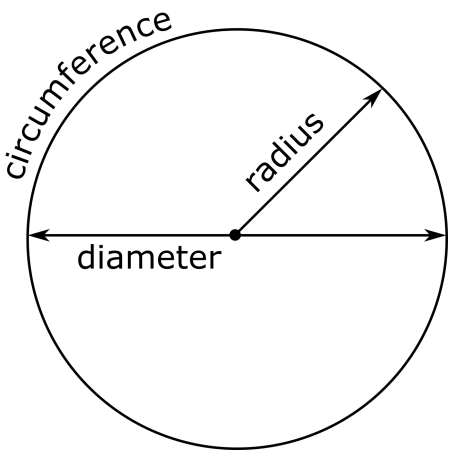
3. A loonie is (approximately) an **undecagon** (11-sided shape).
It is **"regular":** All of the sides of the loonie are equal in length.
The perimeter is 83.16 mm.
What is the length of each side?



The perimeter of a circle is called the **circumference**, and you calculate it with a special formula.

First, know this:

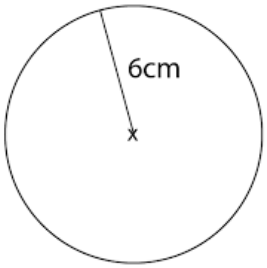
- The **diameter** of a circle is the length from one end to the other (this line MUST go through the centre)
- The **radius** is HALF the diameter.
    - It's also the distance from centre to outside



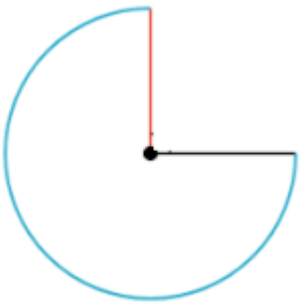
$r = \frac{1}{2}d$

$C = \pi d$
OR
$C = 2\pi r$

4. What is the circumference of this circle?



5. This is exactly ¾ of a circle, with radius 10 cm.
What is the perimeter of this entire shape?



6. The dotted lines here are *not* part of the shape; they are only there to help you see that this is a square with two **semicircles** (half-circles) attached. What is this shape's perimeter?