MTH1W

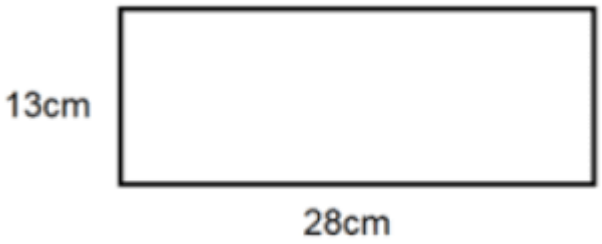
Area

The **area** of a two-dimensional (flat) shape is the **space** that it occupies.

- There are formulas for the areas of most basic shapes

Examples

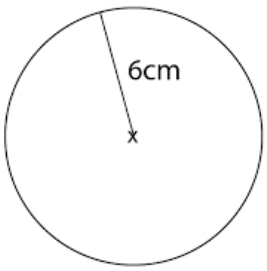
1. What is the area of this rectangle?



$$A = L \times W$$
$$A = (\quad) \times (\quad)$$
$$A = \quad cm^2$$

Note the units!
" cm " is a distance, for *lengths*
the ^{2} is for *area (one length **times** another)*

2. What is the area of this circle?

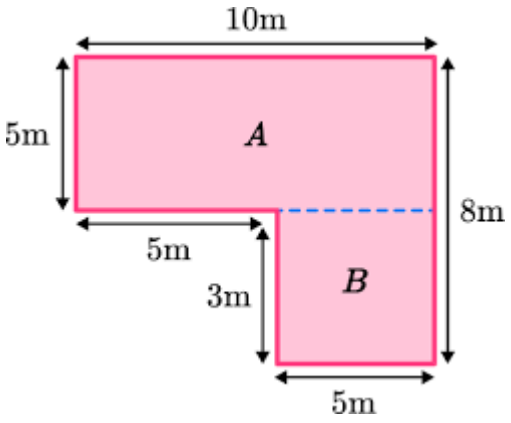


$$A = \pi r^2$$
$$A = 3.14 \times (\quad)^2$$
$$A = 3.14 \times (\quad)$$
$$A = \quad cm^2$$

Practice

3. Calculate the area of this circle.

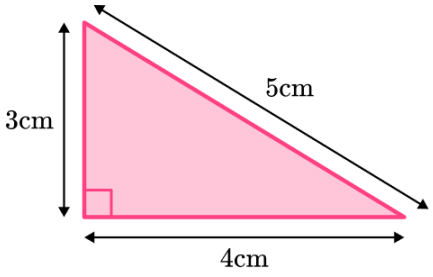
4. You can calculate the area of this L-shape by dividing it into two rectangles (shown)
Calculate the area of rectangle A, *and* Rectangle B, then add them together to get the total area.



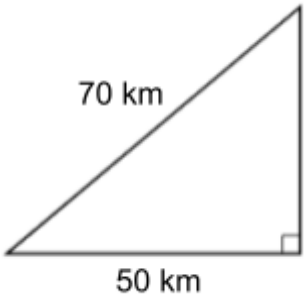
The area of a triangle is $A = \frac{1}{2}bh$, where:

- *b* is the length of the base (any side of the triangle)
- *h* is the height of the triangle (must be 90 degrees to base)

5. a) Label the *base* and *height* of this triangle.
b) Then, use that information to calculate its area.



6. Find the **area** of this triangle.
   - You will need to find its **height** first !



Practice

1. Find the area of a circle with a diameter of 18 m.

2. Find the radius of a circle if its area is 900 cm^2

3. Find the length of a square if its area is 81 km^2

4. Find the length of a square if its area is 90 mm^2

5. A rectangle has a length that is 4 times its width.
   Its area is 196 ft^2.
   What are its dimensions?