

The **perimeter** of a shape is simply the **distance around the outside of the shape**.

In this activity, we'll be working out the perimeter of a range of different 2D shapes.

When working out the perimeter we must make sure that we check the unit of measure – is it measured in mm, cm, m, km, or something else?

Sometimes we need to use a ruler to work out the perimeter.

In this activity, we will be given some of the measurements, so we won't need a ruler.

We'll use the measurements we are given to work out those we don't know.



Let's get started.

Let's have a look at a regular 2D shape.



This is a regular hexagon.

If a shape is **regular**, it has **sides that are all the same length**.

If the sides of this hexagon are 9 cm each, what is the total perimeter?

Answer

We know that the sides are all the same length because the shape is regular.

We know that a hexagon has 6 sides.

So, we simply multiply 9 cm by 6.

$$9 \text{ cm} \times 6 = 54 \text{ cm.}$$

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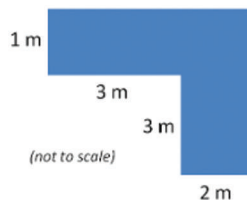
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Let's have a look at another shape.

This time the shape is **not regular**.

This means that at least some of the sides will be different lengths.



We need to look at the information we have been given, in order to work out the missing information.

To work out the length on the right of the shape, we can **add the two lengths on the left (vertical)**: 1 m and 3 m – this will give us 4 m.

To work out the length across the top of the shape, we can **add the two lengths across the bottom (horizontal)**: 3 m and 2 m – this will give us 5 m.

Now, we have the measurements of all six sides.

The final job is to add all six lengths together.

Top tip: find a starting point and work around the shape.

$$1\text{ m} + 5\text{ m} + 4\text{ m} + 2\text{ m} + 3\text{ m} + 3\text{ m} = 18\text{ m}$$

The perimeter is **18 m** in total.



Now it's your turn to have a go!

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What is the perimeter of this **regular pentagon**?

Each side is 16 cm in length.



Answer:

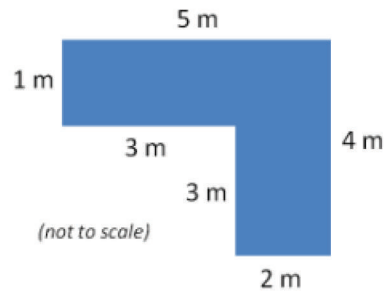
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What is the perimeter of this **irregular shape**?



Answer:

What is the perimeter of this equilateral triangle?



The length across the bottom of the triangle is **22 cm**.

Answer:

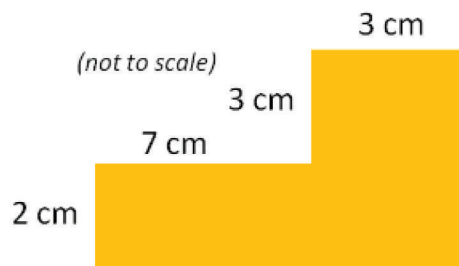
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Use the information provided to work out the perimeter of this shape.



Answer:

The long side of this rectangle is 35 mm.
The short side of the rectangle is 20 mm.

What is the perimeter of this rectangle?



Answer:

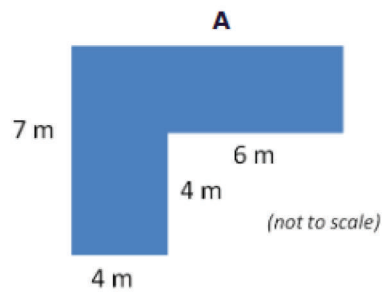
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What is the length of **A**?



Answer:

The perimeter of this regular heptagon is 49 cm.

What is the length of one side?



Answer:

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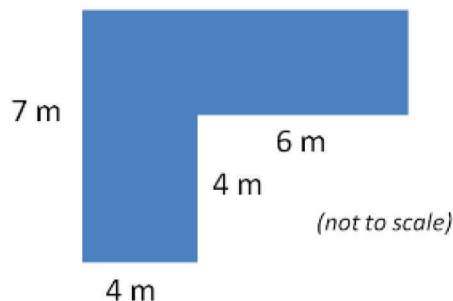
The perimeter of this equilateral triangle is 240 cm.



What is the length of **each side**?

Answer:

Write the perimeter for this irregular shape.



Answer:

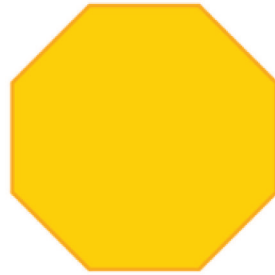
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The perimeter of this regular octagon is 32 cm.



What is the length of one side?

Answer:

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