

Calculate perimeter

Notes and guidance

In this small step, children use their understanding of the properties of different shapes to calculate the perimeter of simple 2-D shapes.

Encourage children to identify equal sides of a square and equal opposite sides of a rectangle to support them in calculating the perimeter. It is important to explore different strategies for calculating perimeter with children and encourage them to use more efficient strategies, for example for a rectangle they could add all four lengths, they could double the width and length and add them together or they could add the width and length and then double.

Although children can calculate the perimeter of rectilinear shapes in this step, these shapes are not formally introduced until Year 4

Things to look out for

- Children may not record the units of measurement in their answer.
- Children may not remember that a square has four equal sides and that opposite sides of a rectangle are equal.
- Children may find it difficult to add lengths measured in centimetres and millimetres.

Key questions

- Are any of the sides equal?
- How can you work out the perimeter of the shape?
- What other method could you use to find the perimeter of the shape?
- How can you work out the lengths of the sides that are not labelled?
- How many sides do you need to measure before you can find the perimeter?
- Do the lengths need to have the same unit of measurement? How do you find equivalent lengths?

Possible sentence stems

- Opposite sides of a rectangle are _____
- The missing side length is _____ cm because ...

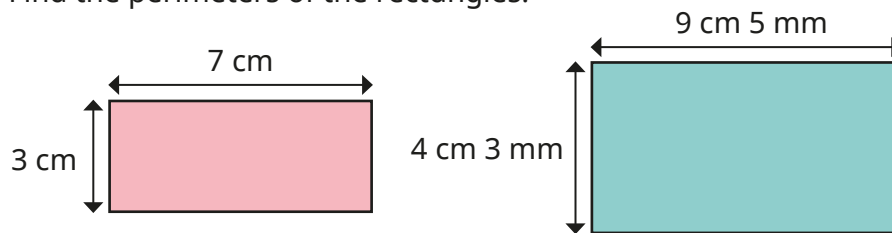
National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- Measure the perimeter of simple 2-D shapes

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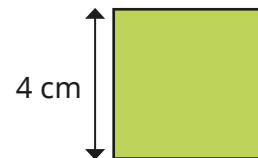
Key learning

- Find the perimeters of the rectangles.

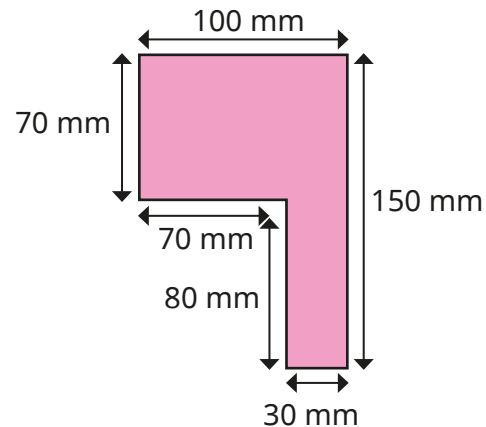
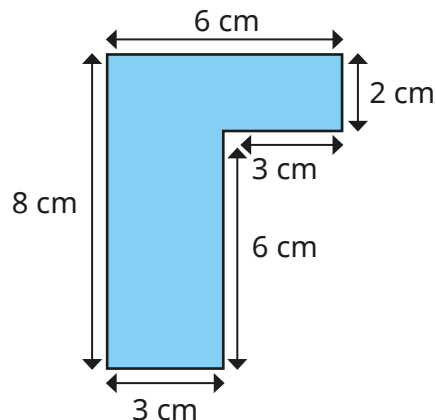


Compare methods with a partner.

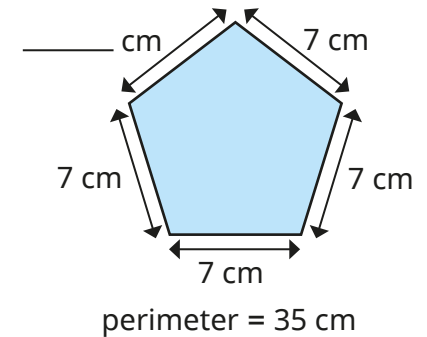
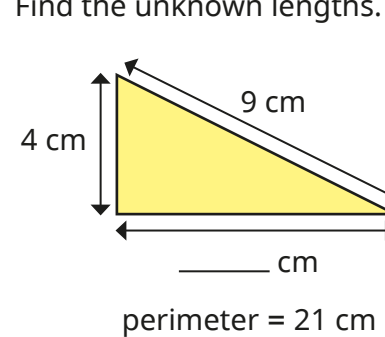
- Find the perimeter of the square.



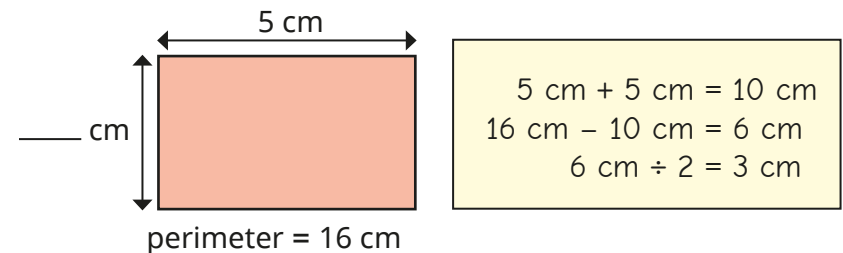
- Work out the perimeter of each shape.



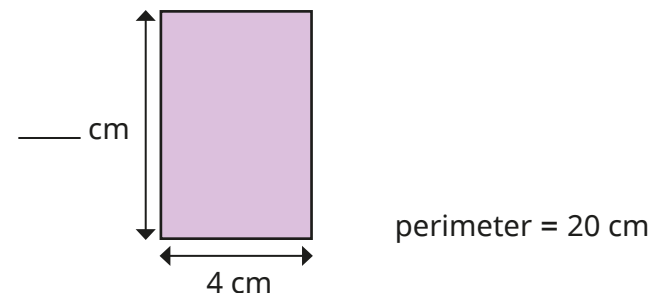
- Find the unknown lengths.



- Esther is finding the unknown length of the rectangle.



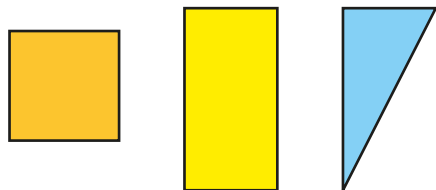
Use Esther's method to find the unknown length.



Calculate perimeter

Reasoning and problem solving

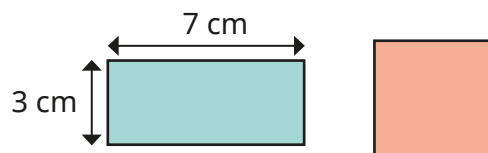
How many sides do you need to measure to find the perimeter of each shape?



Explain your answers.

square: one side
rectangle: two adjacent sides
triangle: all three sides

The rectangle and square have the same perimeter.



What is the length of each side of the square?

5 cm

Each side of this shape is the same length.



The perimeter is 60 cm.
How long is each side?

6 cm

The perimeter of the square is greater than 11 cm and less than 25 cm.



In whole centimetres, what could the length of one side be?

3 cm, 4 cm, 5 cm
or 6 cm