Lesson 4 – Measurement: Perimeter and Area - Calculate Perimeter

NC Objective: Measure and calculate the perimeter of composite rectilinear shapes in cm and m	Resources needed: Differentiated Sheets Teaching Slides	Vocabulary: Perimeter, measure, calculate, lengths, widths, regular, irregular

Children apply their knowledge of measuring and finding perimeter to find the unknown side lengths.
They find the perimeter of shapes with and without grids.
When calculating perimeter of shapes, encourage children to mark off the sides as they add them up to prevent repetition of counting/omission of sides.

Key Questions:
What can you tell me about the sides of a square/rectangle? How does this help you work out this question?
How can you use the labelled sides to find the length of the unknown sides? What strategies can you use to calculate the total perimeter? What does regular mean? Why are rectangles irregular?

★ Working Towards	★★ Working Within	★★★ Greater Depth

Children will be given the length of the perimeter and follow the instructions to draw simple shapes using centimetres and millimetres.	Children will be given the length of the perimeter and follow the instructions to draw shapes using centimetres and millimetres. Children will be given sides that require half centimetres.	Children will be given the length of the perimeter and follow the instructions to draw shapes using centimetres and millimetres. Children will be given sides that require half centimetres. They will also have to convert lengths.

Reasoning & Problem Solving

Here is a square inside another square.

The perimeter of the inner square is 8 cm.

The outer square's perimeter is 2 times the size of the inner square.

What is the length of one side of the outer square?

How do you know? What do you notice?

Here is a square inside another square.

The perimeter of the inner square is 12 cm.

The outer square's perimeter is 2.5 times the size of the inner square.

What is the length of one side of the outer square?

How do you know? What do you notice?

Here is a square inside another square.

The perimeter of the inner square is 15 cm.

The outer square's perimeter is 30 mm more than three times the size of the inner square.

What is the length of one side of the outer square?

How do you know? What do you notice?

Cut out each question and complete in your book.

Can you draw a square with a perimeter of 20 cm?

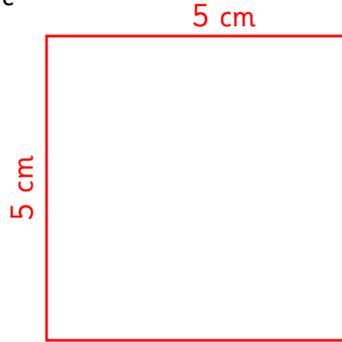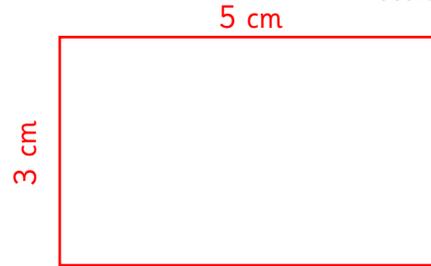Can you draw a rectangle with a perimeter of 16 cm?

Can you draw a square with a perimeter of 120 mm?

Can you draw a rectangle with a perimeter of 20 cm?

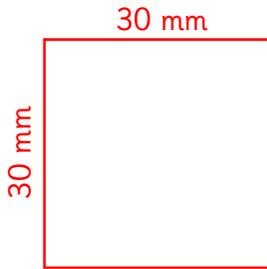Cut out each question and complete in your book.
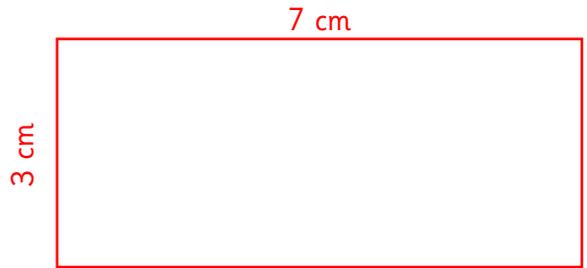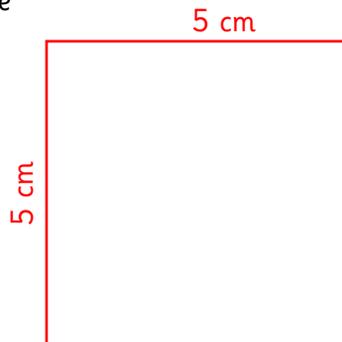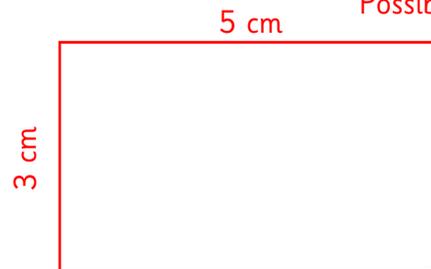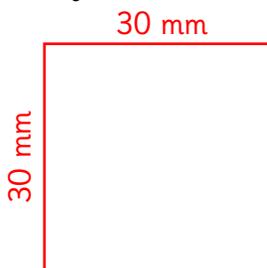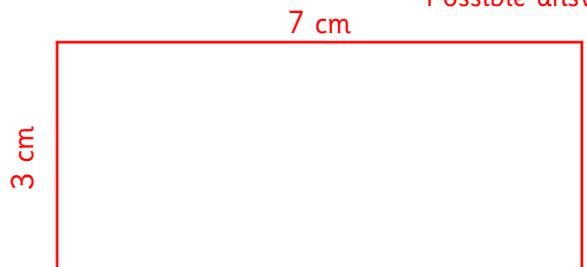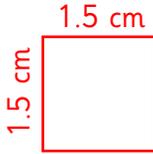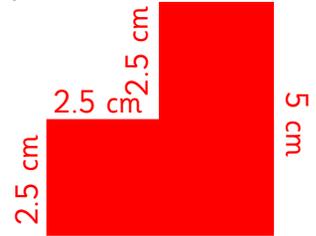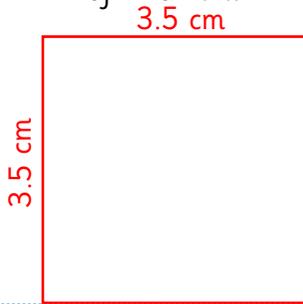
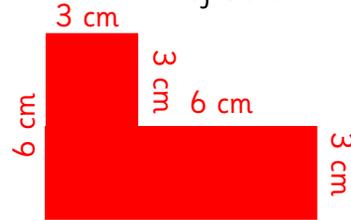Can you draw a square with a perimeter of 20 cm?

5 cm

5 cm

Can you draw a rectangle with a perimeter of 16 cm?

Possible answer:

5 cm

3 cm

Can you draw a square with a perimeter of 120 mm?

30 mm

30 mm

Can you draw a rectangle with a perimeter of 20 cm?

Possible answer:

7 cm

3 cm

Cut out each question and complete in your book.

Can you draw a square in cm with a perimeter of 60 mm?

Can you draw a with a perimeter of 20 cm?

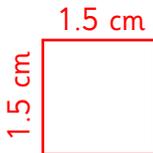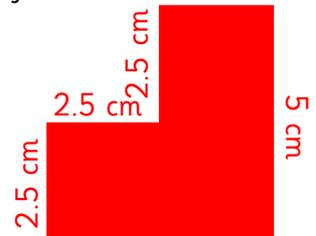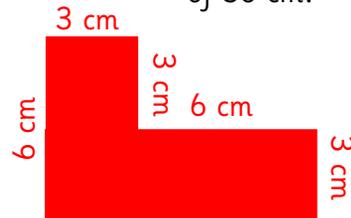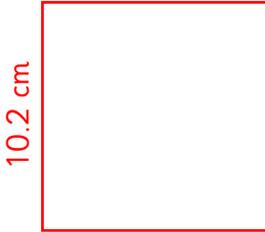Can you draw a square in cm with a perimeter of 140 mm?

Can you draw a with a perimeter of 30 cm?

Cut out each question and complete in your book.

Can you draw a square in cm with a perimeter of 60 mm?

Can you draw a with a perimeter of 20 cm?

Can you draw a square in cm with a perimeter of 140 mm?

Can you draw a with a perimeter of 30 cm?

Cut out each question and complete in your book.

Can you draw a square in cm with a perimeter of 60 mm?

1.5 cm
1.5 cm

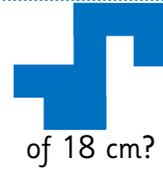Can you draw a [shape] with a perimeter of 20 cm?

2.5 cm
2.5 cm
2.5 cm
2.5 cm
2.5 cm
5 cm

Can you draw a square in cm with a perimeter of 140 mm?

3.5 cm
3.5 cm

Can you draw a [shape] with a perimeter of 30 cm?

3 cm
3 cm
6 cm
6 cm
3 cm
3 cm

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Cut out each question and complete in your book.

Can you draw a square with a perimeter of 20 cm less than 608 mm?

Can you draw a with a perimeter of 18 cm?

Can you draw a square with a perimeter of 2.3 cm more than 525 mm?

Can you draw a with a perimeter of 24 cm?

Cut out each question and complete in your book.

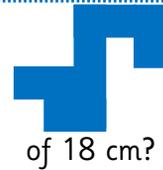Can you draw a square with a perimeter of 20 cm less than 608 mm?

Can you draw a with a perimeter of 18 cm?

Can you draw a square with a perimeter of 2.3 cm more than 525 mm?

Can you draw a with a perimeter of 24 cm?

Cut out each question and complete in your book.

Can you draw a square with a perimeter of 20 cm less than 608 mm?

10.2 cm

10.2 cm

20 cm = 200 mm
608 − 200 = 408 mm
408 ÷ 4 = 102 mm =
= 10.2 cm

Can you draw a [shape] with a perimeter of 18 cm?

2 cm
1 cm
2 cm
2 cm
2 cm
1 cm
2 cm
1 cm
3 cm
1 cm
1cm
2cm
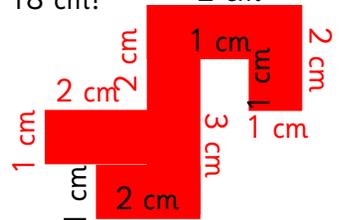
Can you draw a square with a perimeter of 2.3 cm more than 525 mm?

13.7 cm

13.7 cm

2.3 cm = 23 mm
525 + 23 = 548 mm
548 ÷ 4 = 137 mm =
= 13.7 cm

Can you draw a [shape] with a perimeter of 24 cm?

1 cm
2 cm
1 cm
3 cm
1 cm
1 cm
1 cm
2 cm
2 cm
2 cm
2 cm
2 cm
6 cm

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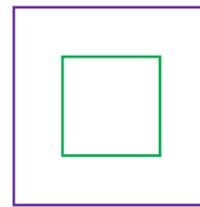Here is a square inside another square.

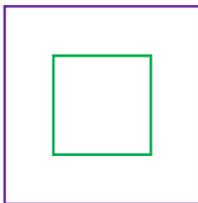The perimeter of the inner square is 8 cm.

The outer square's perimeter is 2 times the size of the inner square.

What is the length of one side of the outer square?
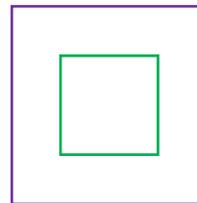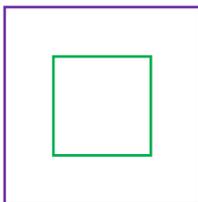
How do you know? What do you notice?

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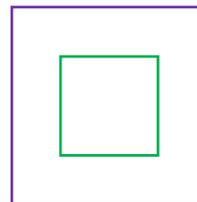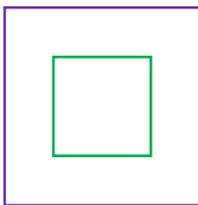
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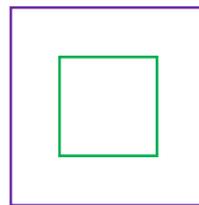
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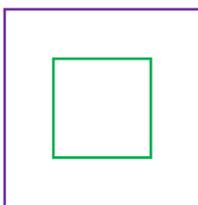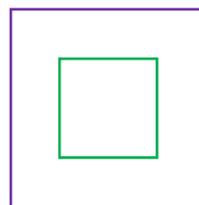
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Answers

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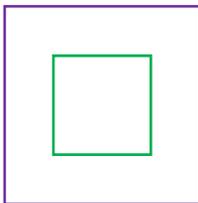The outer square's perimeter is 2 times the size of the inner square.

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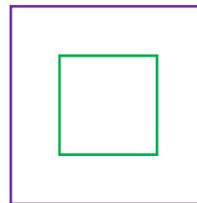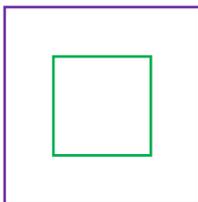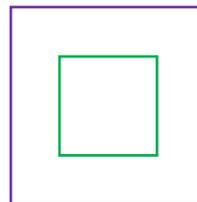
Small square = 8 cm.
Large square = 16 cm.
Length of one of the outer sides is 16 ÷ 4 = 4 cm.

Here is a square inside another square.

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What is the length of one side of the outer square?

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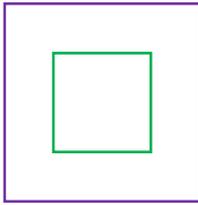
Small square = 12 cm.
Large square = 30 cm.
Length of one of the outer sides is
30 ÷ 4 = 7.5 cm.

Here is a square inside another square.
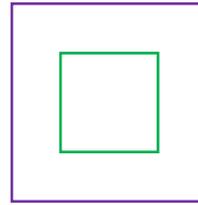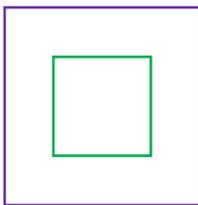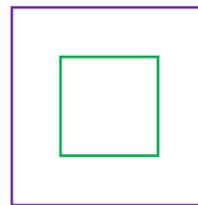
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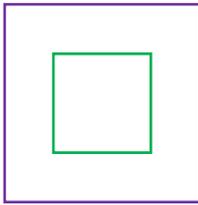
What is the length of one side of the outer square?

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Answers

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Small square = 15 cm.
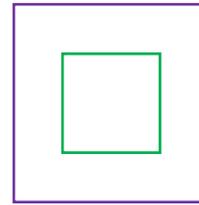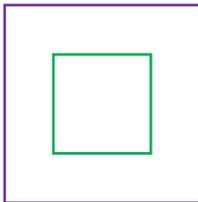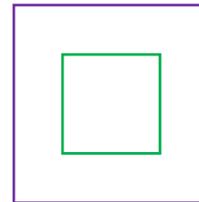Large square = 45 cm + 30 mm = 48 cm.
Length of one of the outer sides is
48 ÷ 4 = 12 cm.