

Always, Sometimes, Never

When all the sides of a rectangle are odd numbers, the perimeter is even.

Prove it.



Draw some rectangles to help you.

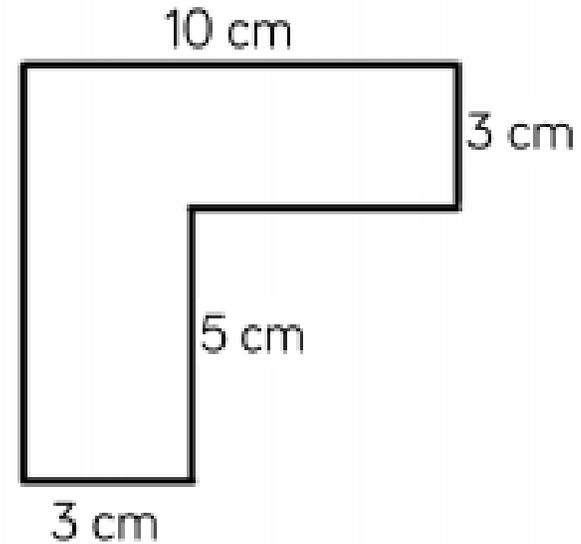
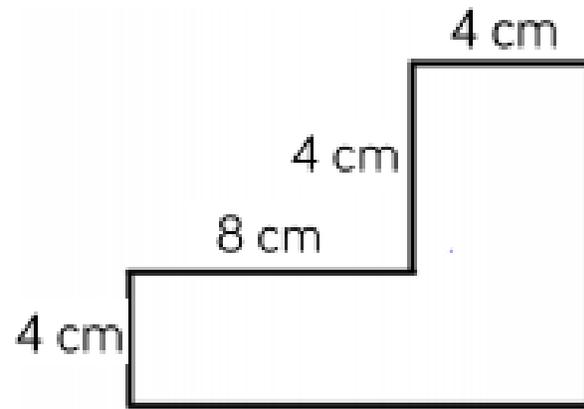


Investigate what happens when all the sides of a rectangle are even.

RECALL



Find the perimeter of the shapes.



Can you use multiplication to make the calculations easier for you?



Can you draw a different shape with the same perimeter

**GUIDED
PRACTICE**

LO: finding the perimeter of rectangular shapes.

Some will even find the perimeter of shapes made from other shapes.

Some will answer word problems.

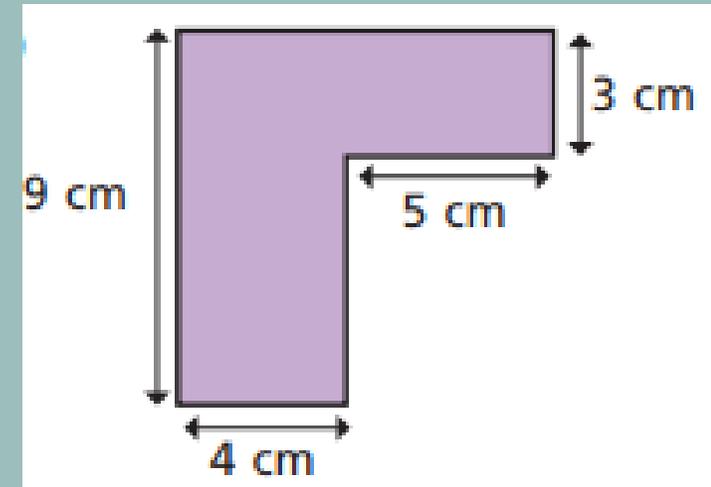
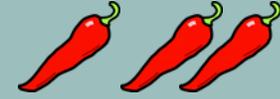
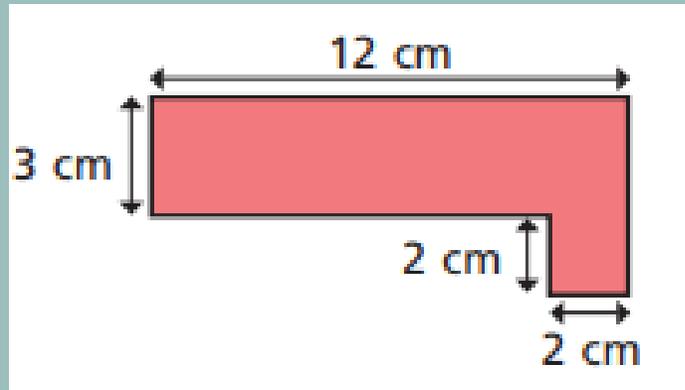
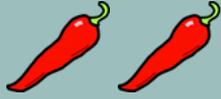
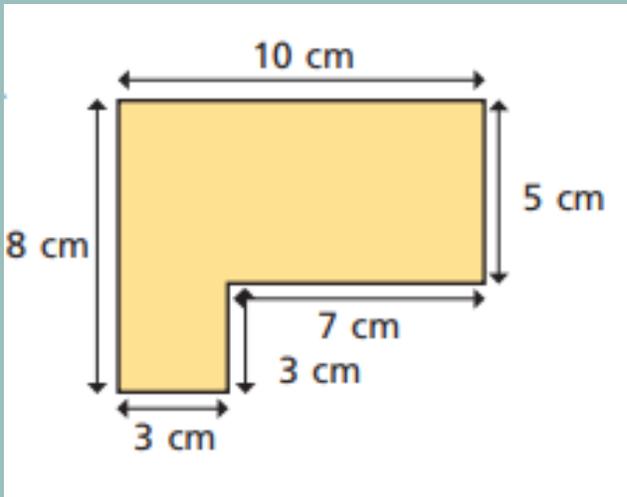
Most will explain their methods.

All will find the perimeter of shapes when given the length of sides

LEARNING HABIT CURIOSITY. |



Work out the perimeter of these shapes.



Make sure you add up all sides.

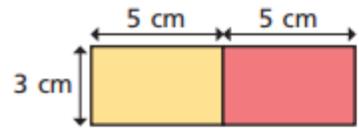


Put the answers in ascending order.

**INTELLIGENT
QUESTIONS**



Mo puts two 5 cm by 3 cm rectangles next to each other.



The perimeter of each small rectangle is 16 cm, so the perimeter of my larger rectangle must be $2 \times 16 \text{ cm} = 32 \text{ cm}$.

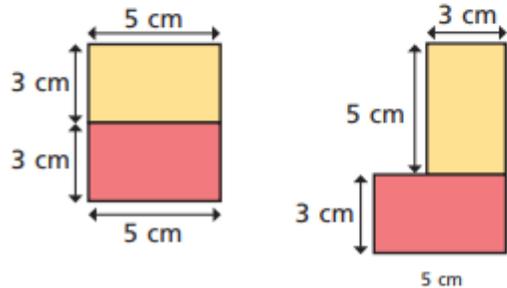


a) Is Mo correct?

Work out the perimeter of the larger rectangle to check your answer.

b) Mo puts the rectangles together in different ways.

Work out the perimeter of each large shape.

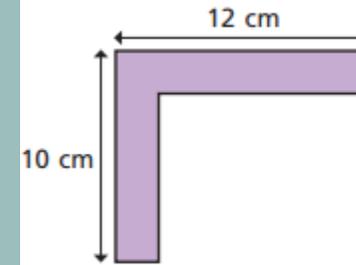


Think about what other sides you might need for the second question



For question 1 b why is the second shape more difficult to work out?

Dani thinks there isn't enough information to work out the perimeter of the shape.



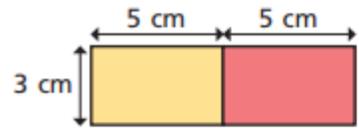
Is Dani correct?

Explain your answer.

DIVE DEEPER 1



Mo puts two 5 cm by 3 cm rectangles next to each other.



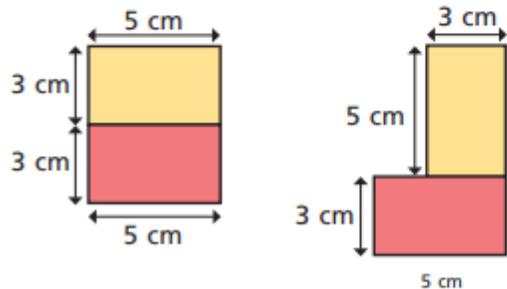
The perimeter of each small rectangle is 16 cm, so the perimeter of my larger rectangle must be $2 \times 16 \text{ cm} = 32 \text{ cm}$.

a) Is Mo correct?

Work out the perimeter of the larger rectangle to check your answer.

b) Mo puts the rectangles together in different ways.

Work out the perimeter of each large shape.

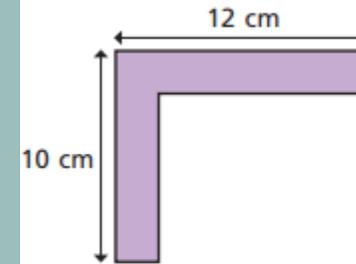


A = Mo is incorrect the actual answer is 26cm

$$1A = 24 \text{ cm}$$

$$1B = 26 \text{ cm}$$

Dani thinks there isn't enough information to work out the perimeter of the shape.



Is Dani correct?

Explain your answer.

Dani correct as you need the measurement to the side on the far right and the side at the bottom to work out the length of the other two sides.



Think about what other sides you might need for the second question



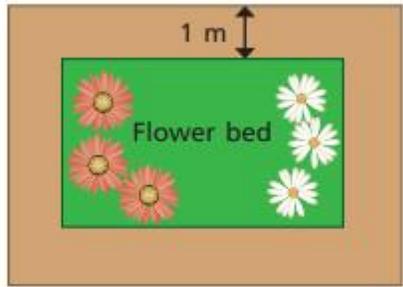
For question 1b why is the second shape more difficult to work out?

DIVE DEEPER 1 ANSWERS



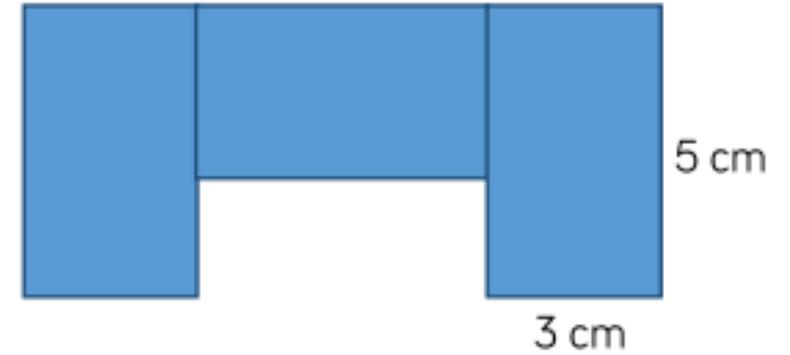
A rectangular flower bed is 5 m long and 3 m wide.

The path around the flower bed is 1 m wide.



- a) What is the perimeter of the flower bed?
- b) What is the perimeter of the outside of the path?

The shape is made from 3 identical rectangles. Calculate the perimeter of the shape.



Draw it out to help you.



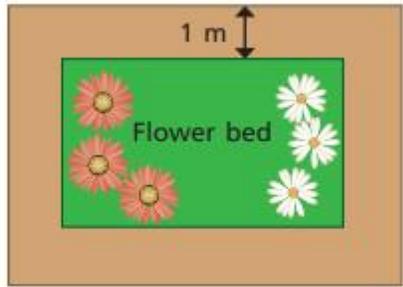
Draw a different shape for the second question using the same shapes.

DIVE DEEPER 2



A rectangular flower bed is 5 m long and 3 m wide.

The path around the flower bed is 1 m wide.

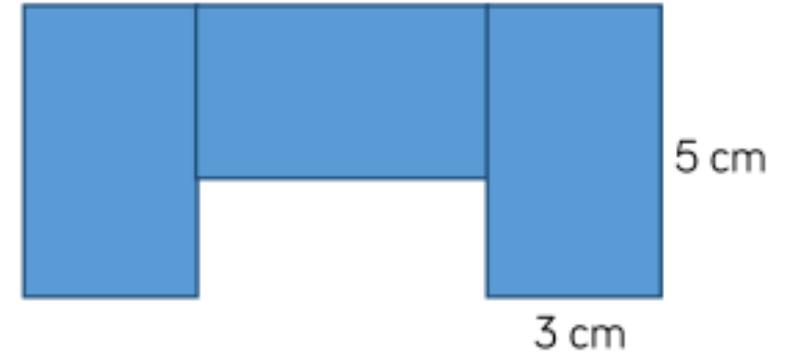


- a) What is the perimeter of the flower bed?
- b) What is the perimeter of the outside of the path?

$$A = 16 \text{ m}$$

$$B = 24 \text{ m}$$

The shape is made from 3 identical rectangles. Calculate the perimeter of the shape.



36 cm



Draw it out to help you.

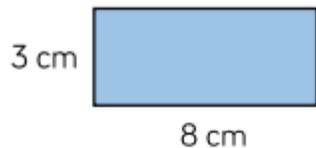


Draw a different shape for the second question using the same shapes.

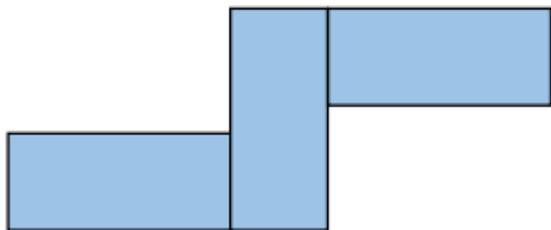
DIVE DEEPER 2 ANSWERS



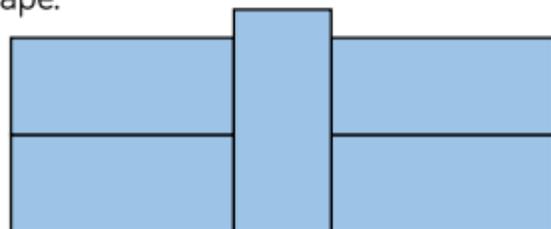
Amir has some rectangles all the same size.



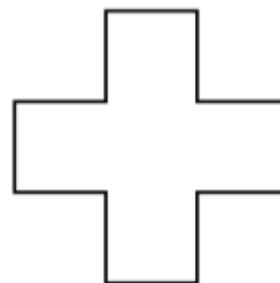
He makes this shape using his rectangles. What is the perimeter?



He makes another shape using the same rectangles. Calculate the perimeter of this shape.



Here is a rectilinear shape. All the sides are the same length and are a whole number of centimetres.



Which of these lengths could be the perimeter of the shape?

48 cm, 36 cm, 80 cm, 120 cm, 66 cm

Can you think of any other answers which could be correct?



Think about the calculations you will have to do to work out the calculations.

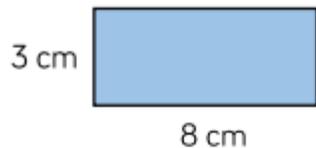


For the second question what is similar about all the answers?

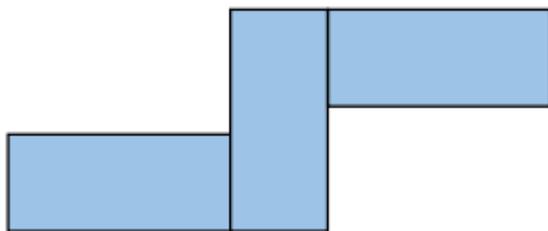
DIVE DEEPER

3

Amir has some rectangles all the same size.

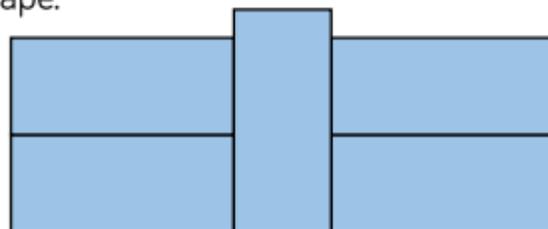


He makes this shape using his rectangles. What is the perimeter?



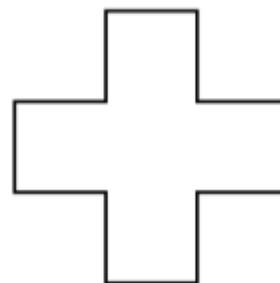
54 cm

He makes another shape using the same rectangles. Calculate the perimeter of this shape.



54 cm

Here is a rectilinear shape. All the sides are the same length and are a whole number of centimetres.



Which of these lengths could be the perimeter of the shape?

48 cm, 36 cm, 80 cm, 120 cm, 66 cm

Can you think of any other answers which could be correct?

48 cm, 36 cm or 120 cm as there are 12 sides and these numbers are all multiples of 12

Any other answers suggested are correct if they are a multiple of 12



Think about the calculations you will have to do to work out the calculations.



For the second question what is similar about all the answers?

DIVE DEEPER
3 ANSWERS

