1) a) 3cm + 3cm + 3cm + 3cm = 12cm

b) 5cm + 5cm + 3cm = 13cm

c) 2cm + 2cm + 7cm + 7cm = 18cm

d) 8cm + 3cm + 8cm + 3cm = 22cm

2) A = 10cm

B = 4cm

C = 9cm

D = 6cm

1) Theo is incorrect as he has only added the two sides given and has therefore not calculated the perimeter of the whole shape. Opposite sides of a rectangle are equal length and therefore the missing lengths are 7cm and 4cm. The perimeter is 7 + 4 + 7 +4 = 22cm.

2) 40÷10=4cm

8+8+4=20cm

The triangle has a perimeter of 20cm.

1) Three possible rectangles:

1cm + 7cm + 1cm + 7cm

2cm + 6cm + 2cm + 6cm

3cm + 5cm + 3cm + 5cm

2) False

Original rectangle – 6 + 4 + 6 + 4 = 20cm perimeter

Half measurements - 3 + 3 + 8 + 8 = 22m

2 + 2 + 12 + 12 = 28cm

3) a) Six rectangles with the following whole integer dimensions:

1cm × 12cm

2cm × 11cm

3cm × 10cm

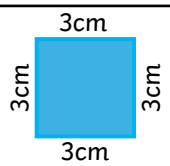
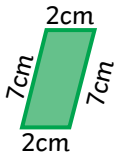
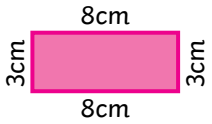
4cm × 9cm

5cm × 8cm

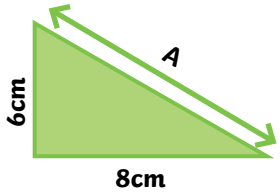
6cm × 7cm

b) Children's answers will vary.

1) Calculate the perimeter of these shapes. You can use the box below for your working out.

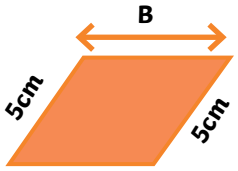
a)	b)	c)	d)
			
Perimeter = _____	Perimeter = _____	Perimeter = _____	Perimeter = _____

2) Now find the lengths of the missing sides, using the information given to help you.



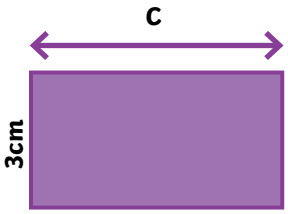
A =

Perimeter = 24cm



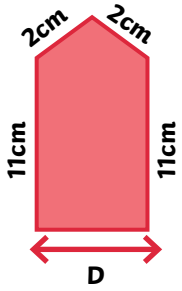
B =

Perimeter = 18cm



C =

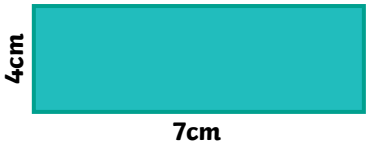
Perimeter = 24cm



D =

Perimeter = 32cm

1) Theo is calculating the perimeter of this rectangle.



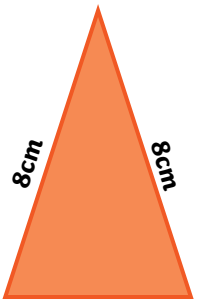
He says that the perimeter is 11cm. Theo is incorrect. Explain why.

2) Each side of the blue shape is the same length.

The missing length of the triangle is the same as one of the sides of the blue shape.

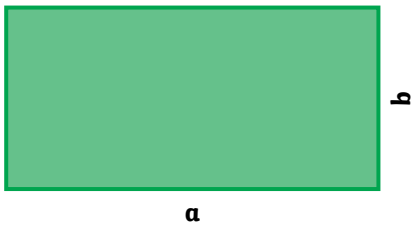
What is the perimeter of the orange triangle?

Perimeter = 40cm



Perimeter =

1) The perimeter of the rectangle is 16cm. The lengths are all whole numbers. What could the lengths of the sides be? Find all three possibilities.



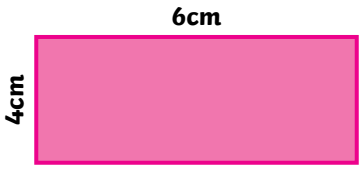
a = _____ b = _____

a = _____ b = _____

a = _____ b = _____

2) Hugo has drawn a rectangle.

If I halve the measurement of one pair of sides and double the length of the other pair, I will get the same perimeter.

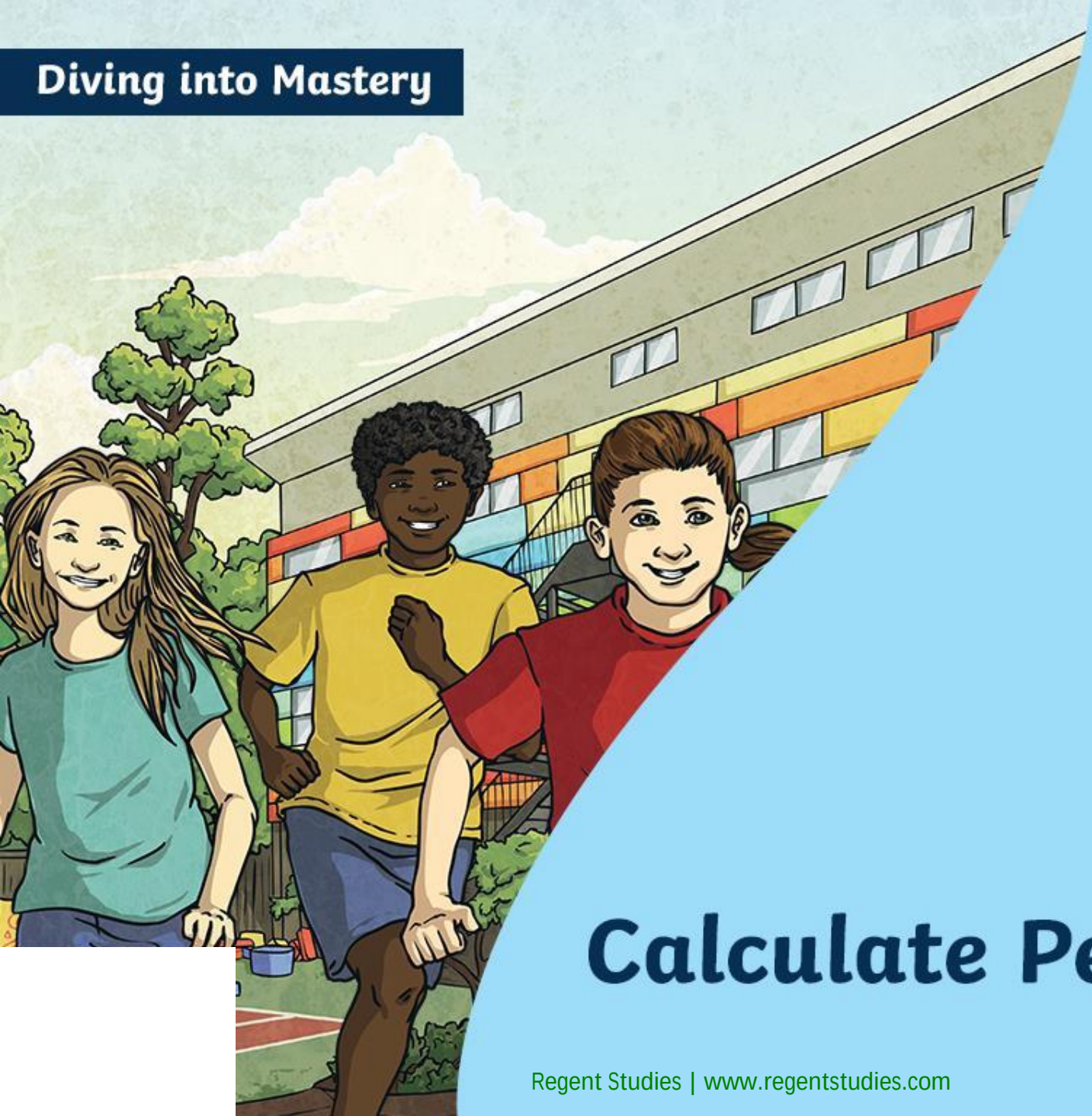


Is this true? Prove it!

3) **a)** Explore how many different rectangles you can draw with a perimeter of 26cm.

b) What other shapes can you draw with the same perimeter? Explore.

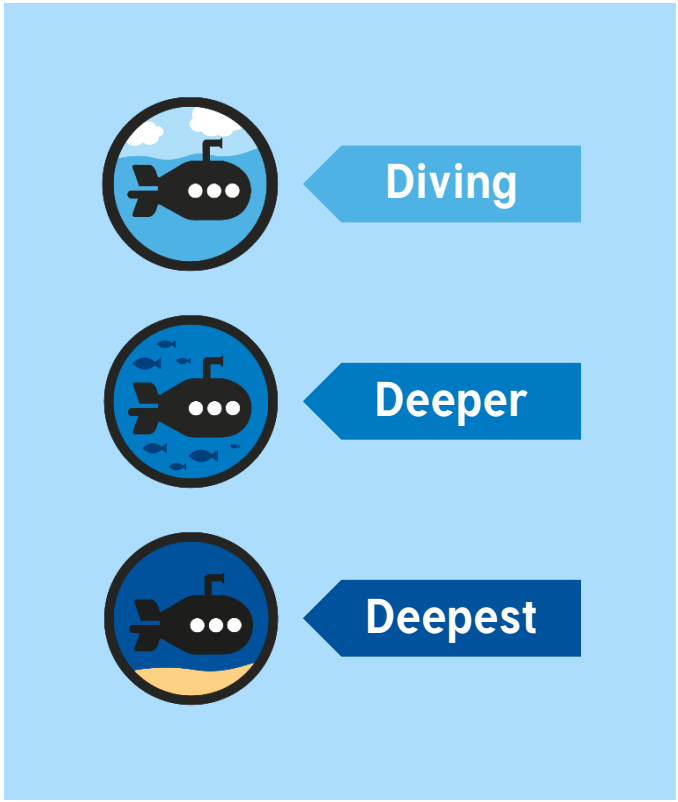
Diving into Mastery



Calculate Perimeter

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

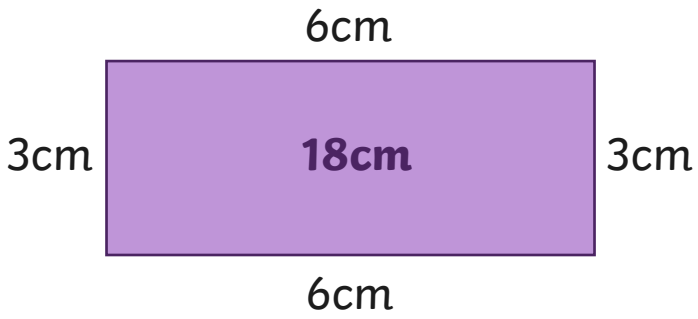
These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

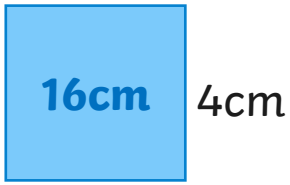
Aim

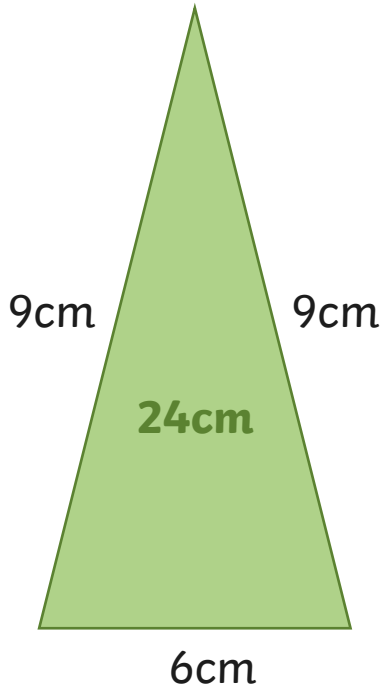
- Measure the perimeter of simple 2-D shapes.

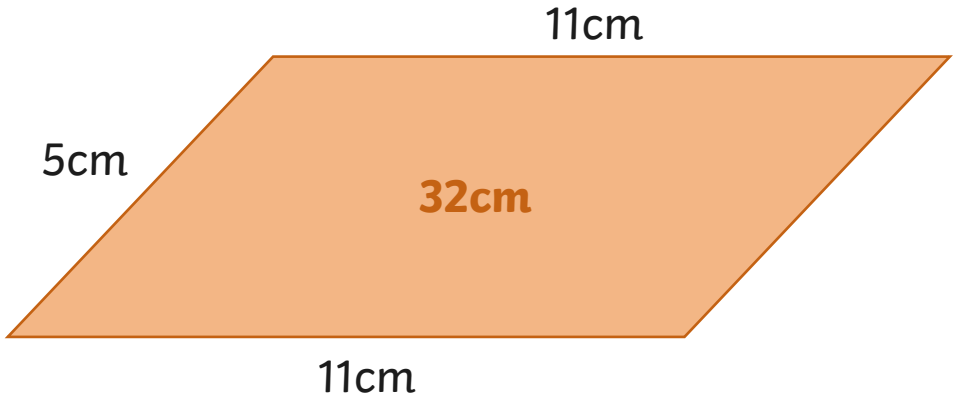
Calculate Perimeter **Diving**

Calculate the perimeter of these shapes.



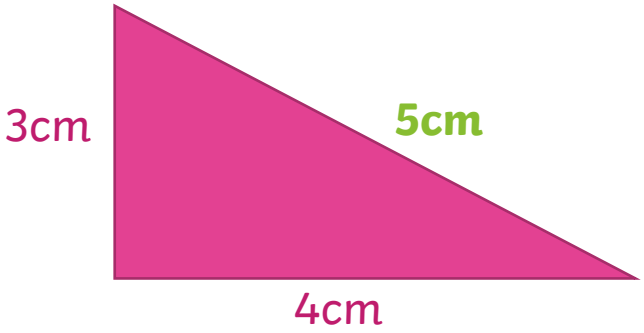




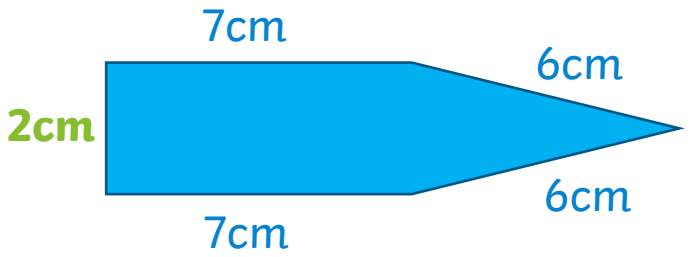


Calculate Perimeter | **Diving**

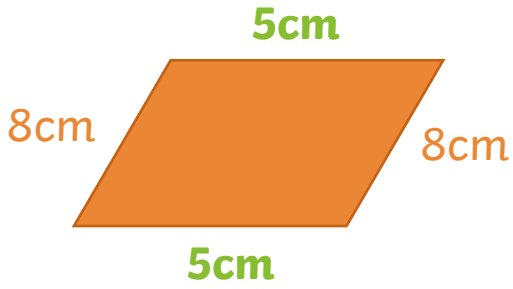
Now find the lengths of the missing sides, using the information given to help you.



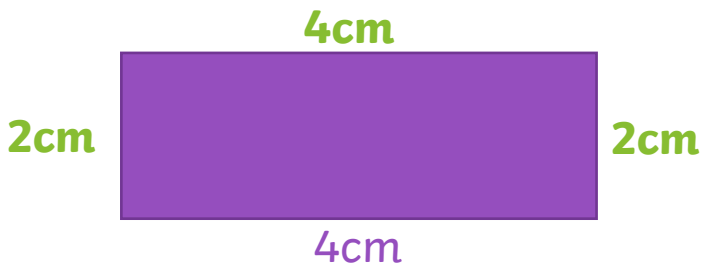
Perimeter = 12cm



Perimeter = 28cm



Perimeter = 26cm



Perimeter = 12cm

Calculate Perimeter **Deeper**

Tom is calculating the perimeter of this rectangle.

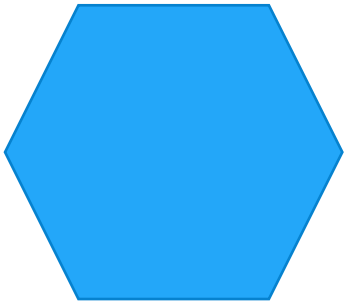
He says that the perimeter is 14cm. Is Tom correct?
Explain your reasoning.

Tom is incorrect as he has only added the two sides given and has therefore not calculated the perimeter of the whole shape. Opposite sides of a rectangle are equal length, therefore the missing lengths are 8cm and 6cm. The perimeter is 8 + 6 + 8 + 6 = 28cm.

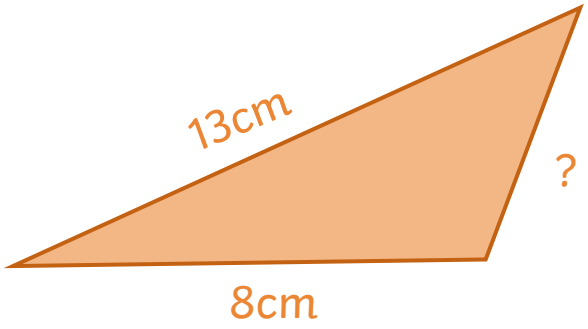
Calculate Perimeter **Deeper**

Each side of the blue shape is the same length.
The missing length on the orange shape is the same as one side of the blue shape.

What is the perimeter of the orange shape?



Perimeter = 30cm

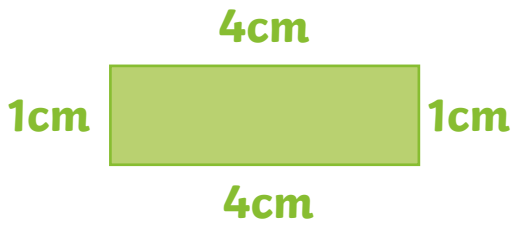


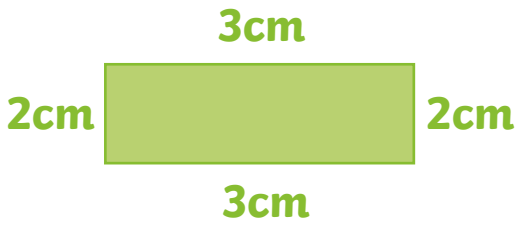
30 ÷ 6 = 5cm. Each side is 5cm in length.
8 + 13 + 5 = 26cm. The triangle has a perimeter of 26cm.

Calculate Perimeter **Deepest**

The perimeter of the rectangle is 10cm. The lengths of the sides are whole numbers.

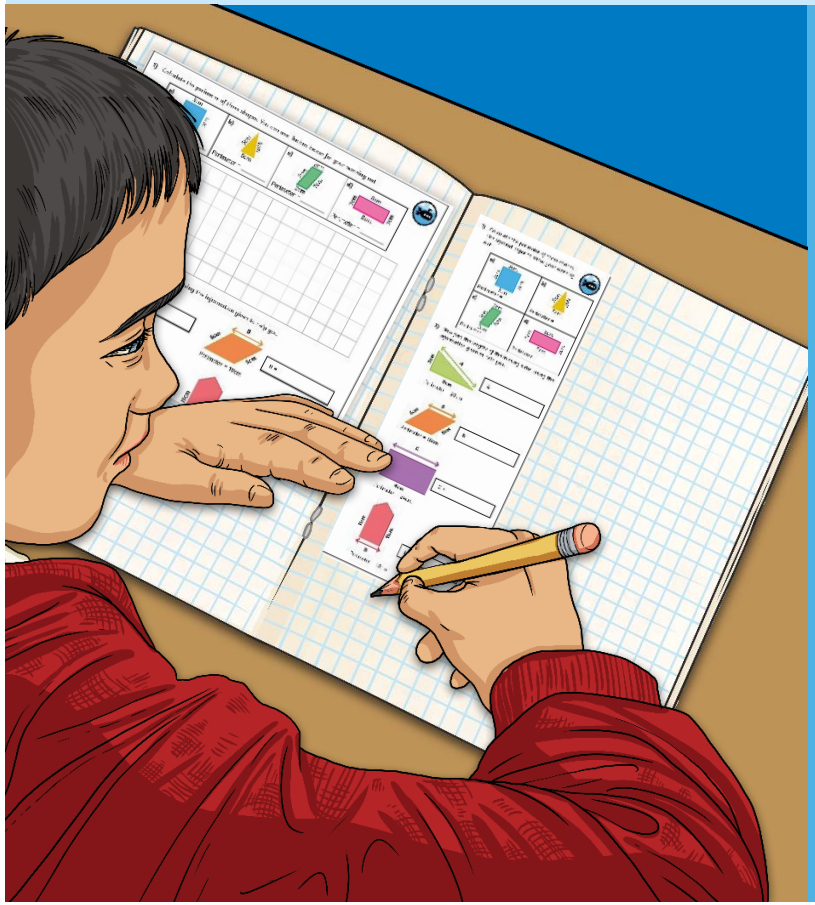
What could the lengths of the sides be? Find all possibilities.

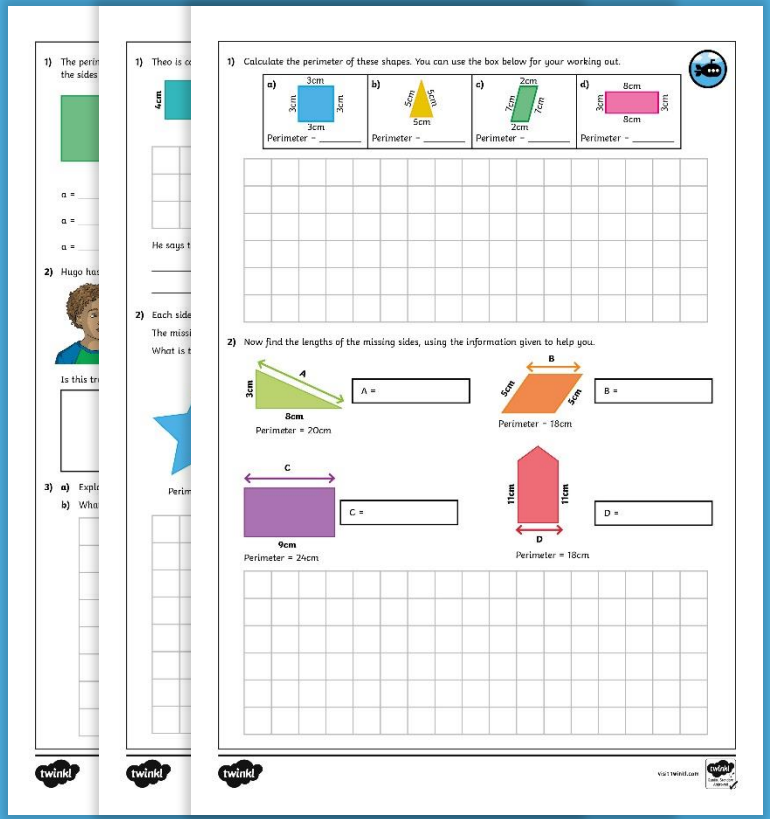


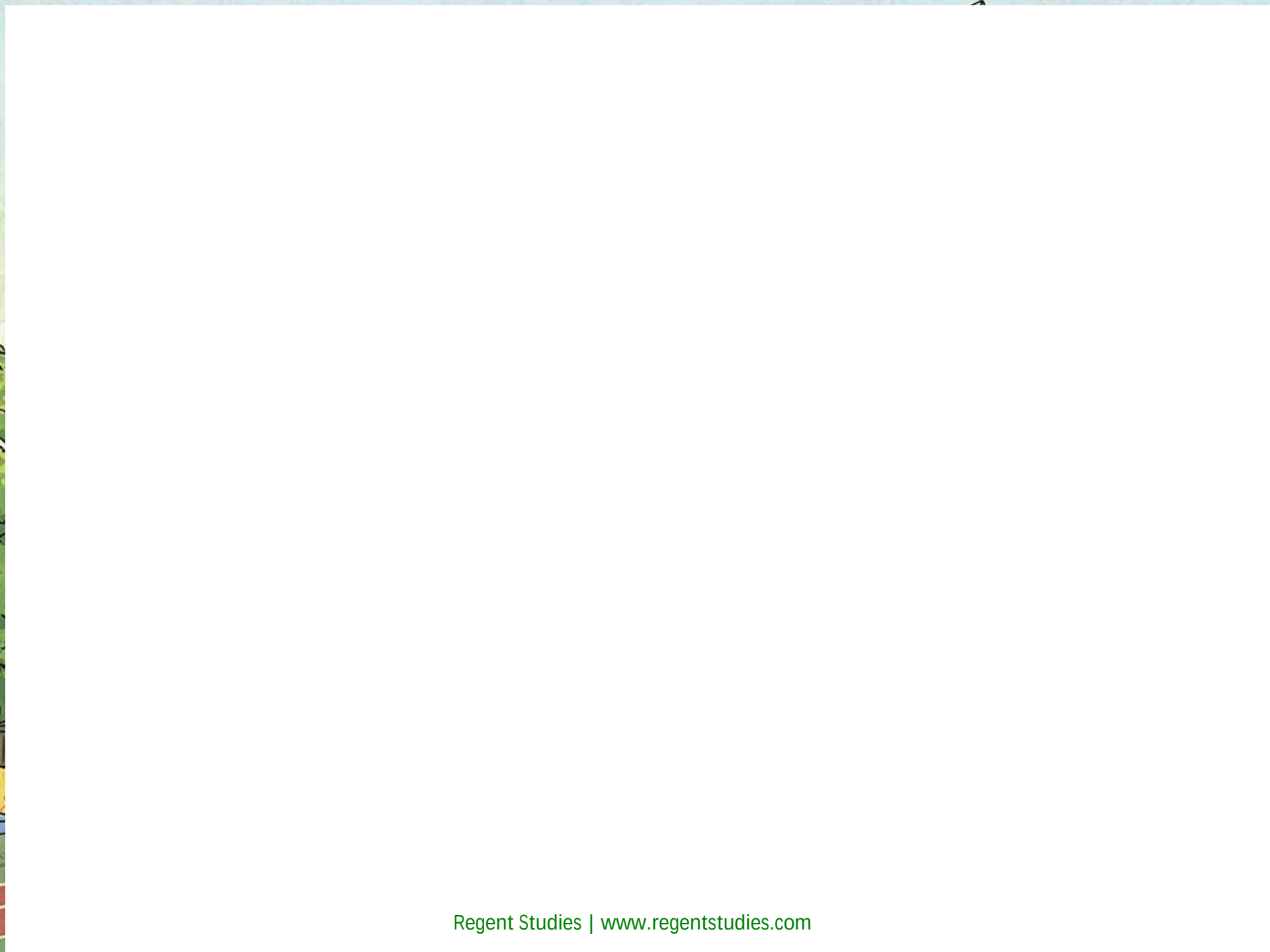


Calculate Perimeter

Dive in by completing your own activity!

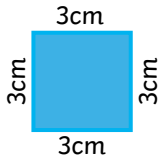






1) Calculate the perimeter of these shapes. Use squared paper to show your working out.

a)

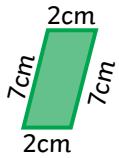


Perimeter =

b)

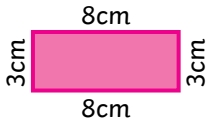
Perimeter =

c)



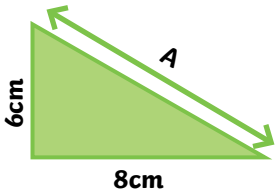
Perimeter =

d)



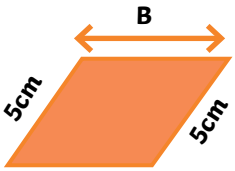
Perimeter =

2) Now find the lengths of the missing sides, using the information given to help you.



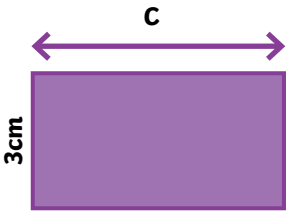
A =

Perimeter = 24cm



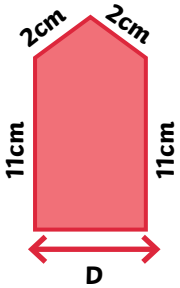
B =

Perimeter = 18cm



C =

Perimeter = 24cm

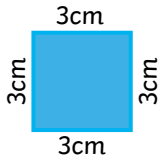


D =

Perimeter = 32cm

1) Calculate the perimeter of these shapes. Use squared paper to show your working out.

a)

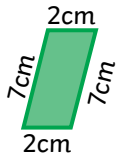


Perimeter =

b)

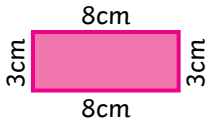
Perimeter =

c)



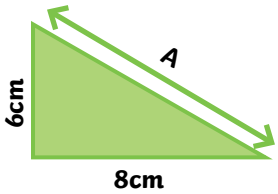
Perimeter =

d)



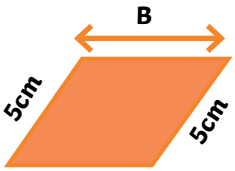
Perimeter =

2) Now find the lengths of the missing sides, using the information given to help you.



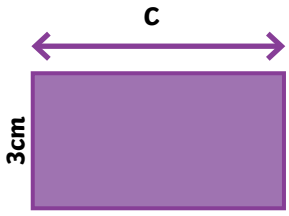
A =

Perimeter = 24cm



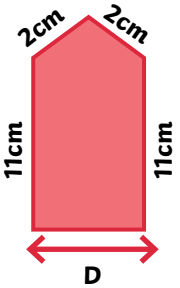
B =

Perimeter = 18cm



C =

Perimeter = 24cm



D =

Perimeter = 32cm

1) Theo is calculating the perimeter of this rectangle.

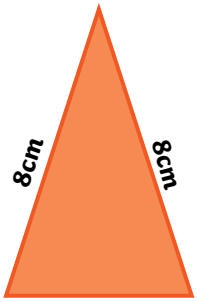
He says that the perimeter is 11cm. Theo is incorrect. Explain why.

2) Each side of the blue shape is the same length.

The missing length of the triangle is the same as one of the sides of the blue shape.

What is the perimeter of the orange triangle?

Perimeter = 40cm



1) Theo is calculating the perimeter of this rectangle.

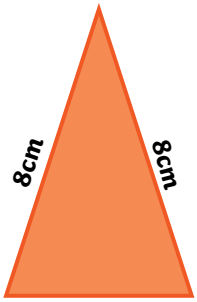
He says that the perimeter is 11cm. Theo is incorrect. Explain why.

2) Each side of the blue shape is the same length.

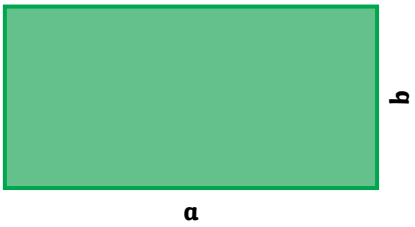
The missing length of the triangle is the same as one of the sides of the blue shape.

What is the perimeter of the orange triangle?

Perimeter = 40cm

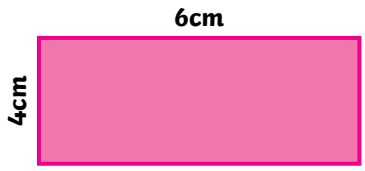


1) The perimeter of the rectangle is 16cm. The lengths are all whole numbers. What could the lengths of the sides be? Find all possibilities.



2) Hugo has drawn a rectangle.

If I halve the measurement of one pair of sides and double the length of the other pair, I will get the same perimeter.

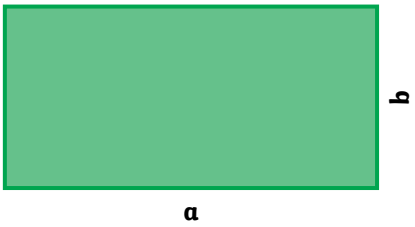


Is this true? Prove it!

3) **a)** Explore how many different rectangles you can draw with a perimeter of 26cm.

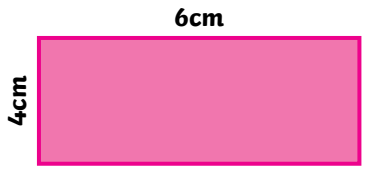
b) What other shapes can you draw with the same perimeter? Explore.

1) The perimeter of the rectangle is 16cm. The lengths are all whole numbers. What could the lengths of the sides be? Find all possibilities.



2) Hugo has drawn a rectangle.

If I halve the measurement of one pair of sides and double the length of the other pair, I will get the same perimeter.



Is this true? Prove it!

3) **a)** Explore how many different rectangles you can draw with a perimeter of 26cm.

b) What other shapes can you draw with the same perimeter? Explore.