Year 5 Week beginning June 22nd

This week your maths will focus on area and perimeter.

REMEMBER TO COMPLETE THE QUIZ ON FRIDAY AND SELF-MARK THE REST.

MONDAY 22nd JUNE

This week the focus of your learning is perimeter.

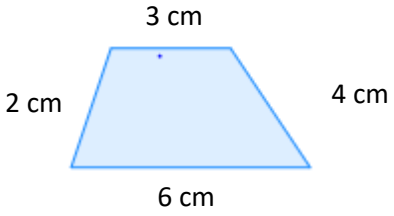
L.O. find the perimeter **22/06/20**

REMEMBER: Perimeter is the distance around the edge of a 2-D shape.

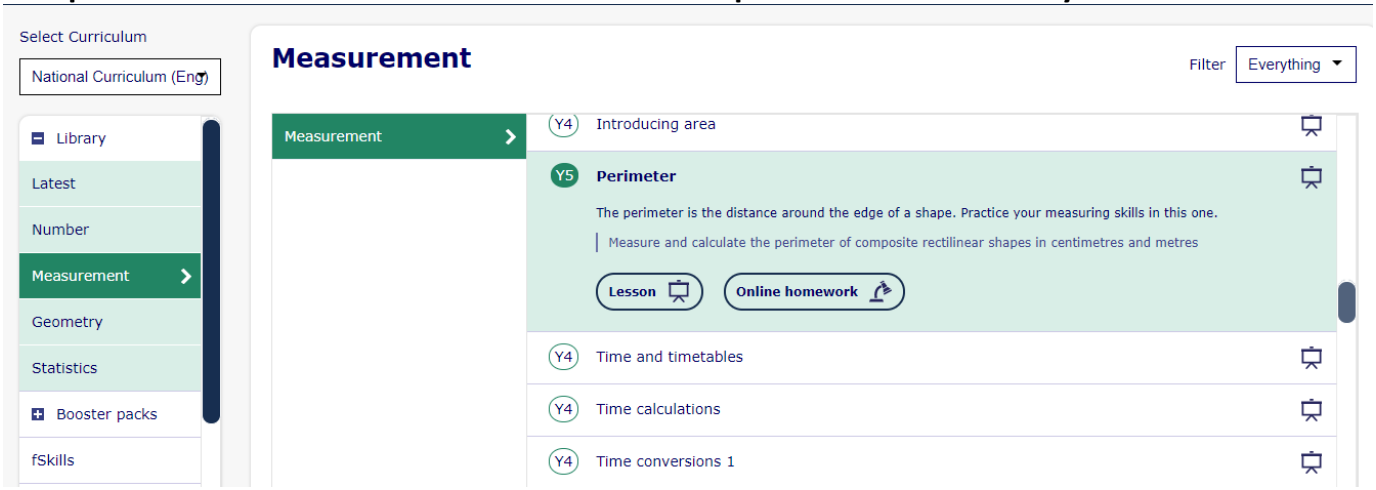
When the shape has straight edges, you add up the lengths of all the sides.
Go clockwise around the shape to make sure you don't miss any of the sides.

WAGOLL

Perimeter = 3 + 4 + 6 + 2 = 15 cm



Complete the lesson and homework for the Year 5 perimeter lesson on My Maths.



Online lessons for perimeter if you need a bit more help or would like a bit more practice:

BBC Bitesize lesson: https://www.bbc.co.uk/bitesize/topics/zvmxsbk/articles/zsr4k7h

Oak National Academy: https://classroom.thenational.academy/lessons/to-find-the-perimeter-and-convert-units-of-measurements/

TUESDAY 23rd JUNE

Today you will be calculating the perimeter of 2D shapes.

L.O. calculate the perimeter of shapes **23/06/20**

REMEMBER: Perimeter is the total distance around a shape's edge.

WAGOLL

For this rectangle:

10 cm

8 cm

Method 1

Perimeter = length + width + length + width

= 10 + 8 + 10 + 8

= 36 cm

Method 2

Perimeter = length + width + length + width

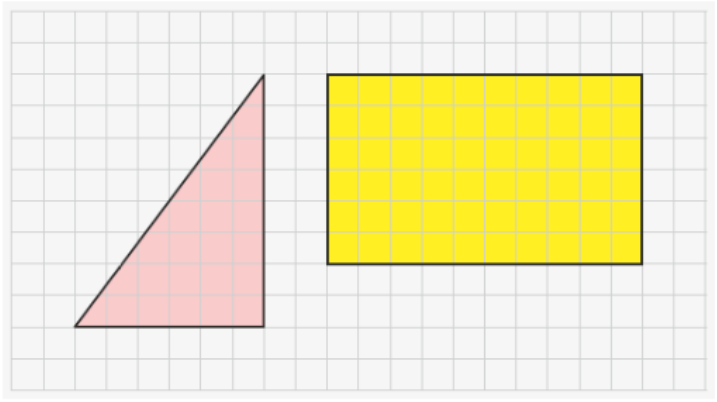
= 2 x (length + width)

= 2 x (10 + 8) cm

= 2 x 18 cm = 36 cm

CALCULATING PERIMETER LESSON

Consider the question:



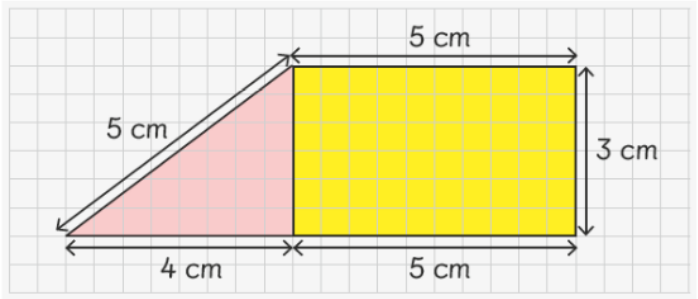
Arrange the triangle and rectangle to make another shape.

Find the perimeter of the figure/shape.

Is there more than one way to make another shape?

1.

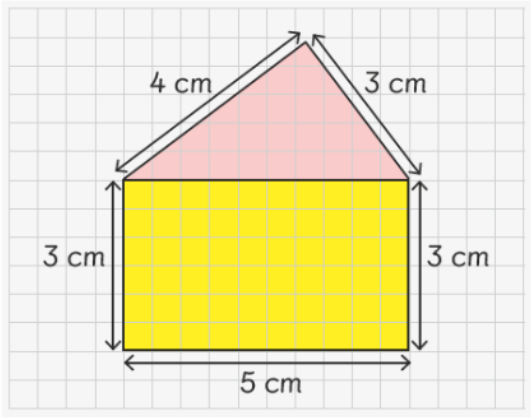
did this.



Perimeter = 5 + 3 + 5 + 4 + 5

= 22 cm

2. did this.



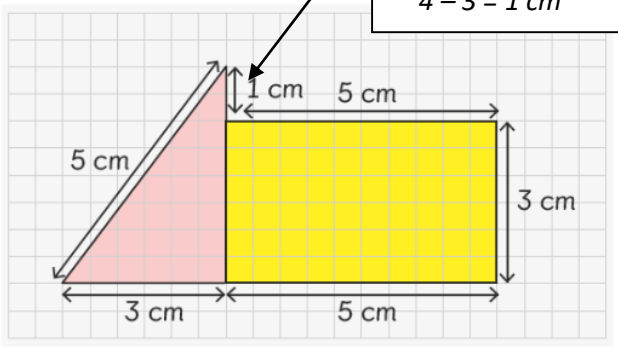
Perimeter = 3 + 3 + 5 + 3 + 4
= 18 cm

Why does this figure have a shorter perimeter than the first one?

3.

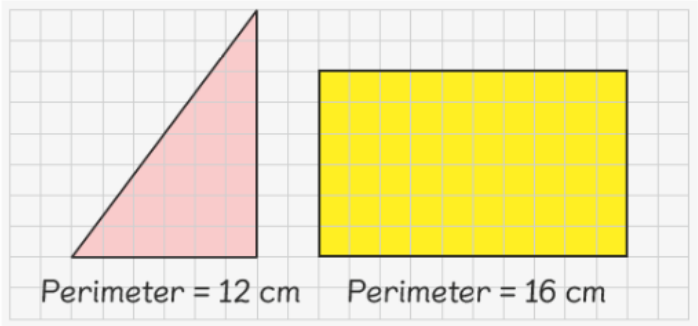
This edge is 1 cm because it is the difference between the 4cm edge of the triangle and the 3 cm edge of the rectangle.
4 – 3 = 1 cm

did this.



Perimeter = 5 + 3 + 5 + 3 + 5 + 1
= 22 cm

4.



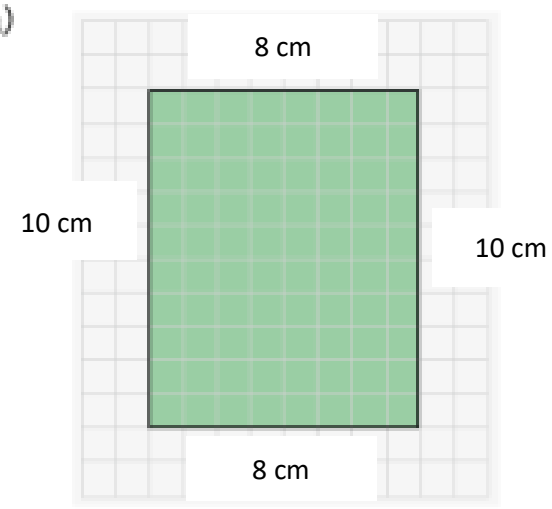
Would the perimeter of the figure formed using this triangle and this rectangle ever be 28 cm?

No, because the total perimeter of the two shapes added together is 12 + 16 = 28 cm. To make another shape using both of these figures, at least part of two of the sides have to be touching, so the perimeter of the new shape has to be less than 28 cm.

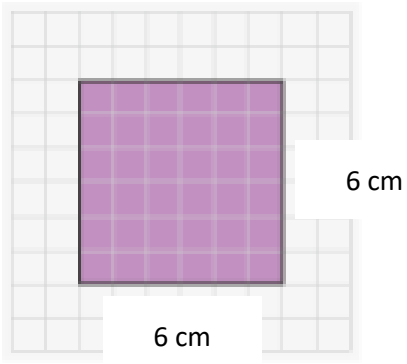
RED QUESTIONS

Use the measurements to calculate the perimeter of these shapes. (They are not drawn to scale).

(a)



(b)



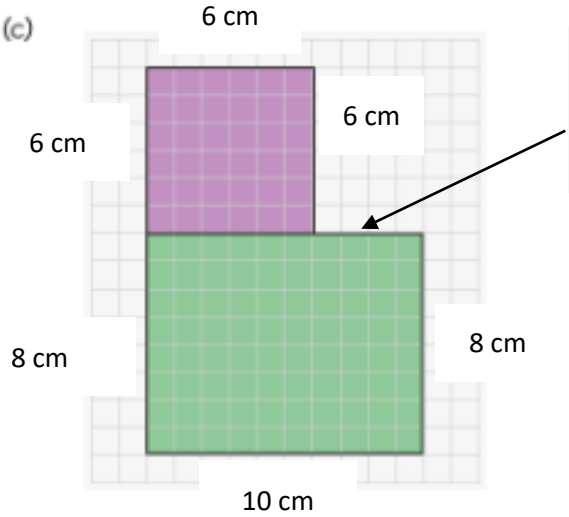
a) Perimeter = _____ + ____ + _____ + _____

= _____ cm

b) Perimeter = ____ + ____ + ____ + ____

= ____ cm

(c)



Remember to calculate the length of this edge.
It is the difference between
_____ - _____ = _____ cm

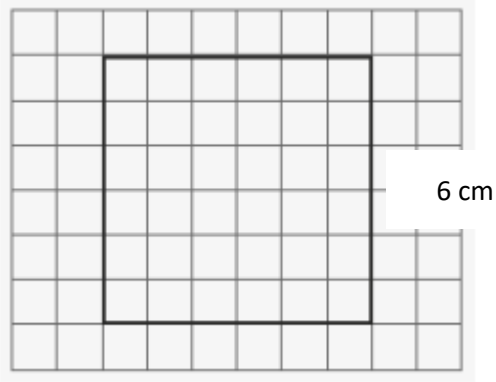
Perimeter = ____ + _____ + _____ + _____ + _____ + _____ + _____

= _____ cm

BLUE QUESTIONS

1. Calculate the perimeter of each figure.

a)



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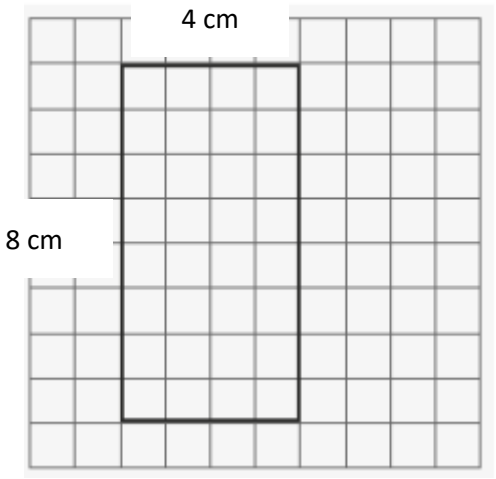
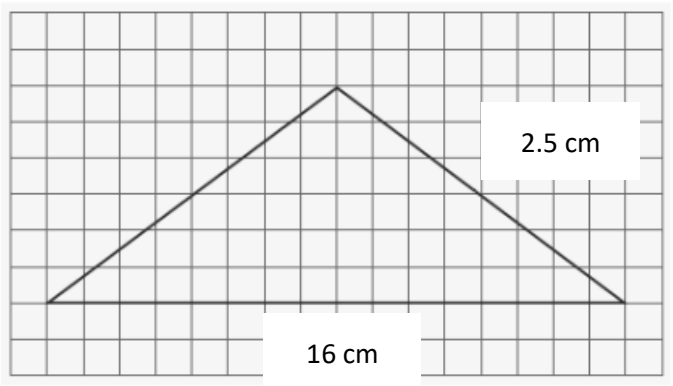
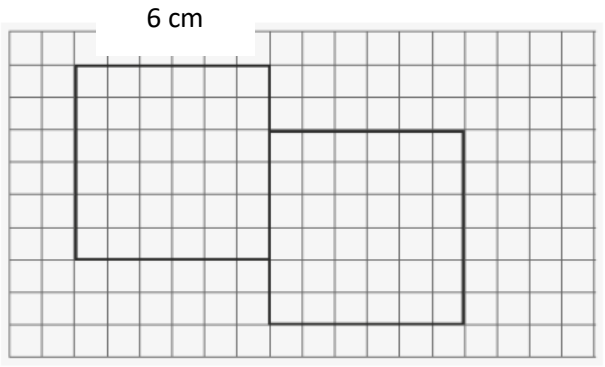


c)

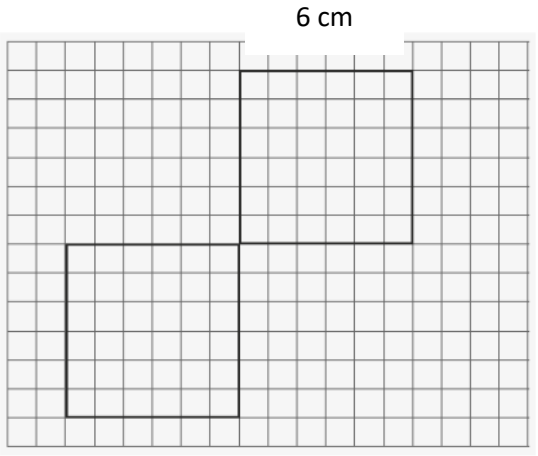


2. Find the perimeter of these figures. **Remember that you will need to work out the missing lengths.**

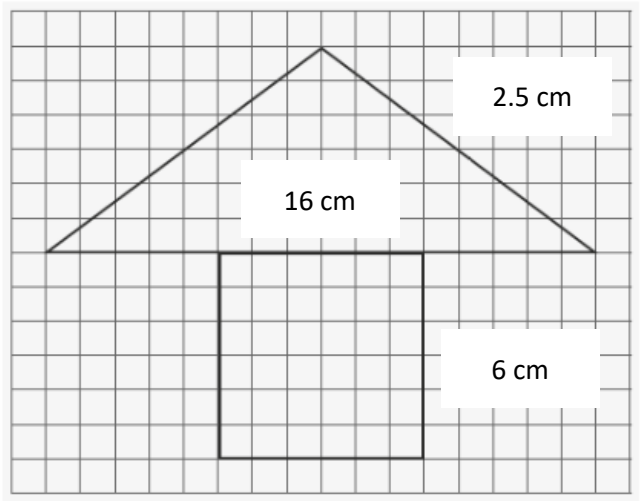
a)



b)

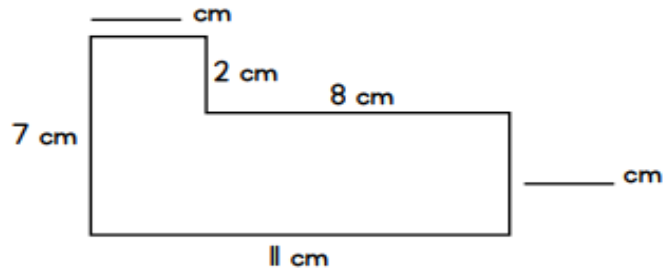


c)

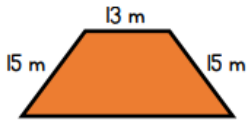


YELLOW QUESTIONS

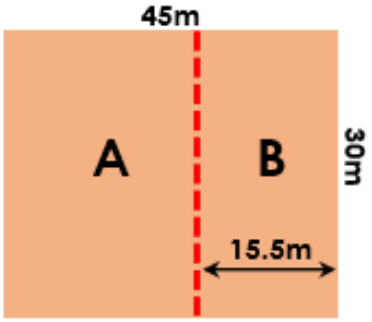
1. Find the missing lengths. Calculate the perimeter of the shape.



2. The perimeter of this shape is 60m. Find the length of the missing edge.

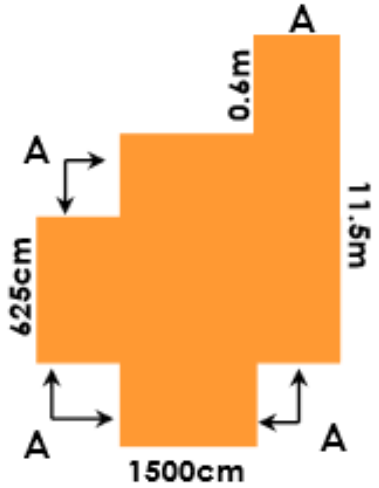


3. Ronnie cuts along the dotted line. He thinks the new perimeters are: A = 119m and B = 91m.



Is Ronnie correct? Prove it.

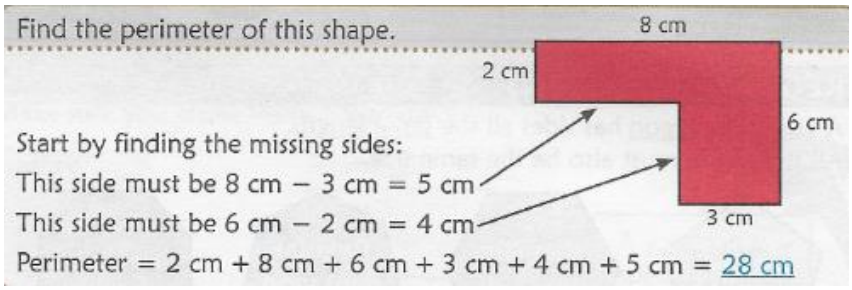
4. The perimeter of this shape is 69m.
The sides labelled A are of equal length.
What is the length of A? Prove it.



WEDNESDAY 24th JUNE

Today's you will be continuing to calculate perimeter of shapes.

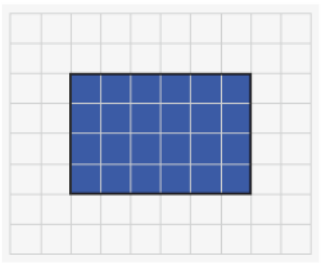
L.O. calculate the perimeter **24/06/20**

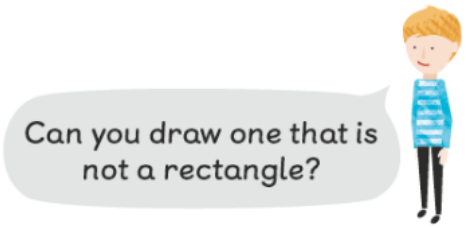
REMEMBER: Perimeter is the total distance around the outside of a 2-D shape.	
If some of the lengths are missing, you will need to work them out before calculating the perimeter.	
1. 4 cm  Squares have four equal sides, so the missing sides must all be 4 cm. Perimeter = 4 + 4 + 4 + 4 = 16 cm.	2. 

PERIMETER LESSON

Consider the question:

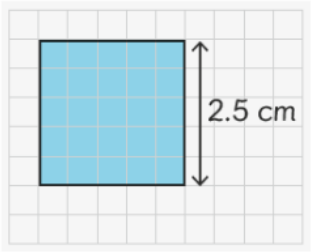
Draw different figures that have a perimeter of 10 cm.





1.

 drew this.



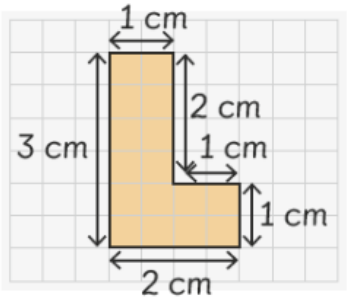
Squares have 4 equal sides, so if I divide the total between the 4 sides, then 10 cm ÷ 4 = 2.5 cm for each side.

Perimeter = 2.5 + 2.5 + 2.5 + 2.5 = 10 cm

or Perimeter = 4 x 2.5 = 10 cm

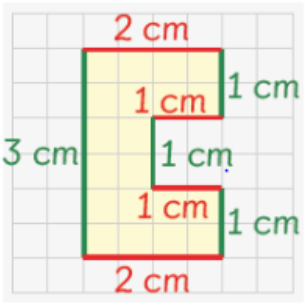
2.

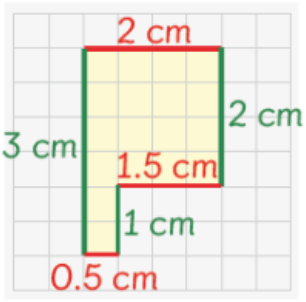
 drew this.

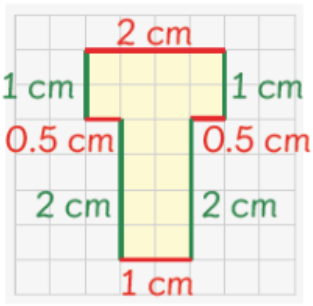


Perimeter = 1 + 2 + 1 + 1 + 2 + 3
= 10 cm

3. Frieda drew these 3 shapes. Which one is the odd one out? Why?







Need to calculate the perimeter of each shape to find the odd one out.

P = 2 + 1 + 1 + 1 + 1 + 1 + 2 + 3
= 12 cm

P = 2 + 2 + 1.5 + 1 + 0.5 + 3
= 10 cm

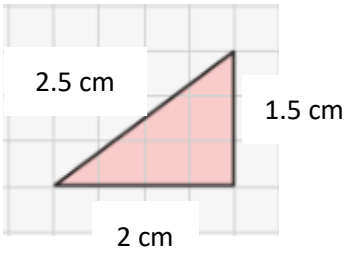
P = 2+1+0.5+2+1+2+0.5+1
= 10 cm

The first shape is the odd one out because it does not have a perimeter of 10 cm.

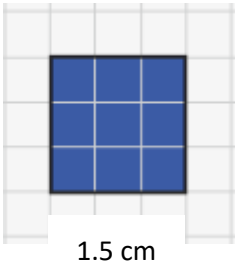
RED QUESTIONS

Find the perimeter of each shape.

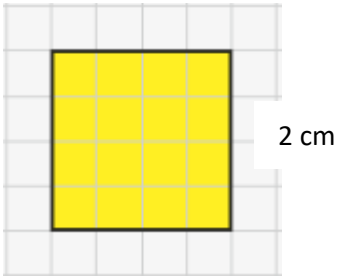
a)



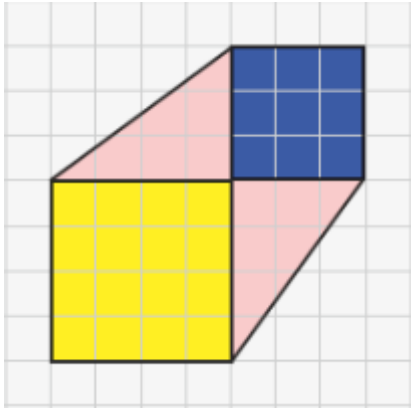
b)



c)



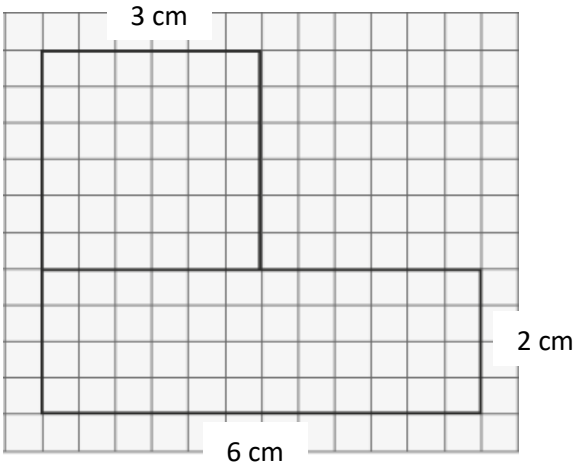
d) Use the measurements from a), b) and c) to calculate the perimeter of this shape.



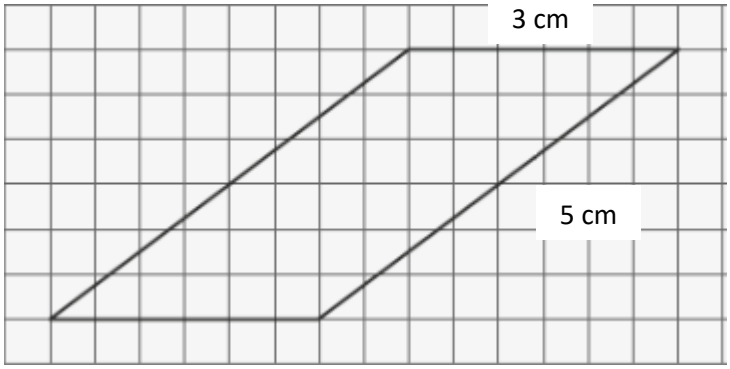
BLUE QUESTIONS

1. Calculate the perimeter of each figure.

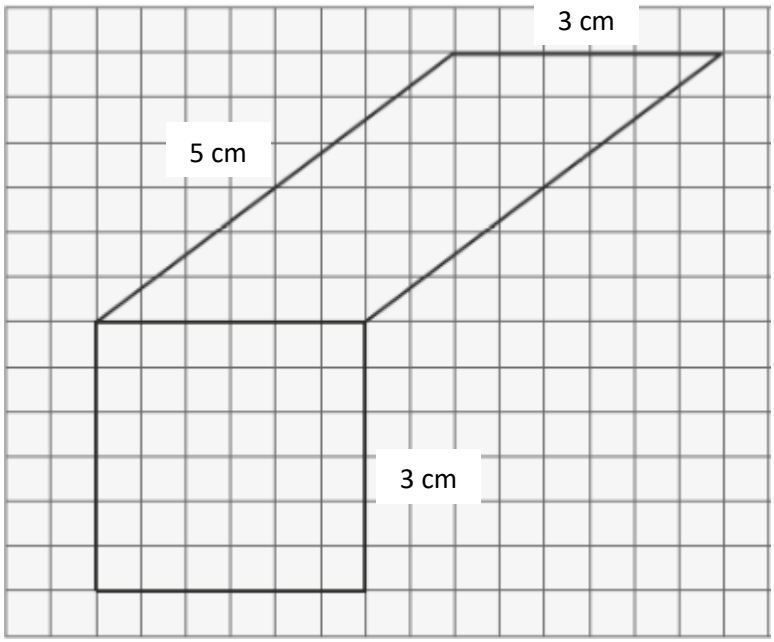
a)



b)



c)



2. Draw three different rectangles, each with a perimeter of 20 cm. Label each of the sides.
(You do not need to draw them accurately with aruler.)

3. Draw three different shapes which are not rectangles, each with a perimeter of 28 cm.

YELLOW QUESTIONS

1. The perimeter of this rectangle is 50 cm. What is its length?

8 cm 

2. Robert has a piece of wire that is 128 cm long.
   He bends it so that it makes a square.
   How long is one side of her square? Explain how you know.

3. A sports field is a rectangular shape.
   It has a perimeter of 180 metres.
   What might the dimensions be? Find four possible answers.

4. Zak has 6 square tiles. Each tile has a perimeter of 40 cm.
   Zak puts his tiles together to make a shape.
   Sketch three different shapes Zak could make and then work out their perimeters.

THURSDAY 25th JUNE

Today's work continues from yesterday.

L.O. calculate the perimeter of different shapes **25/06/20**

EXAMPLE 2.5 m *Find the perimeter of this regular hexagon.* 
I know that if this is a regular hexagon it has six sides of equal length. Perimeter = 6 x 2.5 = 3 x 5 = 15 metres.

PERIMETER LESSON

Four children each have 12 paper strips, each 1 m long.
They think it is possible to make polygons (any 2-D shape) with the same perimeter, but with different shapes. Is this possible?
(You could try this with 12 strips of paper that are much smaller but equal, or draw individual lines to draw the shape.)

1. They make a square, by using 3 strips for each side (12 strips ÷ 4 sides = 3 strips for each side).

Perimeter = 3 + 3 + 3 + 3 = 12m
or
Perimeter = 4 x 3m = 12 m

2. They also make rectangles.

Perimeter = 1 + 5 + 1 + 5 = 12 m
or
Perimeter = 2 x (1 + 5) = 2 x 6 = 12 m

Perimeter = 2 + 4 + 2 + 4 = 12 m
or
Perimeter = 2 x (2 + 4) = 2 x 6 = 12 m

3. They make a triangle.

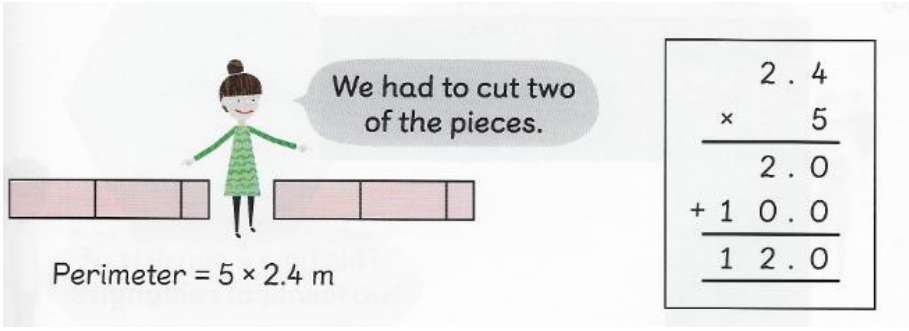
Perimeter = 3 + 4 + 5 = 12 m

Could they have made an equilateral triangle?
Yes, because an equilateral triangle has 3 equal sides and 12 strips shared equally between 3 sides would mean 4 strips for each side of the triangle.
Perimeter = 4 + 4 + 4 = 12 m

4. They make a hexagon.

Perimeter = 2 + 2 + 2 + 2 + 2 + 2 = 12m
or
Perimeter = 6 x 2 m = 12 m

5. They make a pentagon.

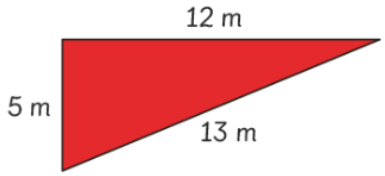


$$\begin{array}{r} 2.4 \\ \times \quad 5 \\ \hline 2.0 \\ +10.0 \\ \hline 12.0 \end{array}$$

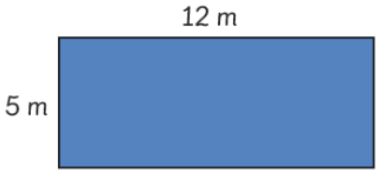
RED QUESTION

Find the perimeter of each figure. Don't forget the missing sides that aren't labelled.

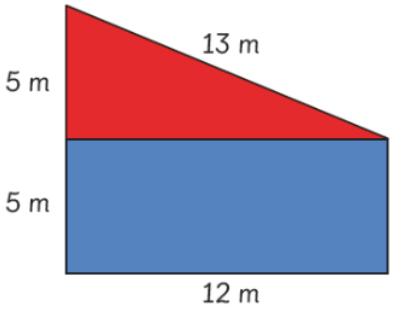
(a)



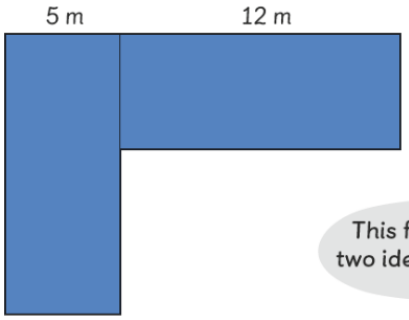
(b)

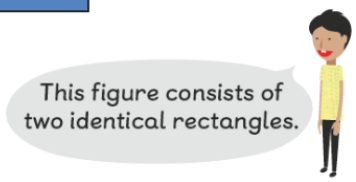


(c)



(d)

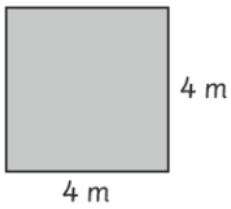




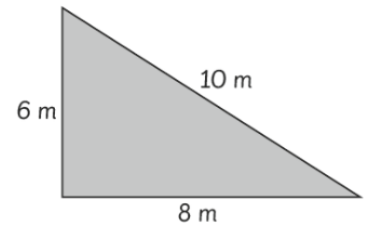
BLUE QUESTIONS

1. Find the perimeter of each figure.

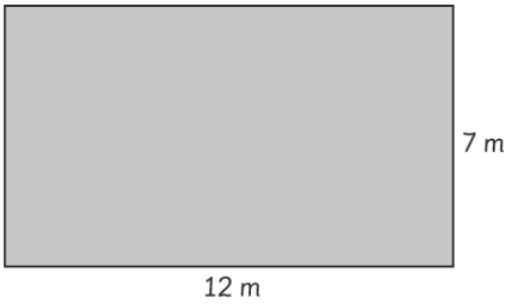
(a)



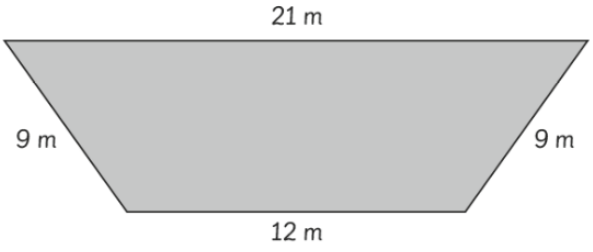
(b)



(c)

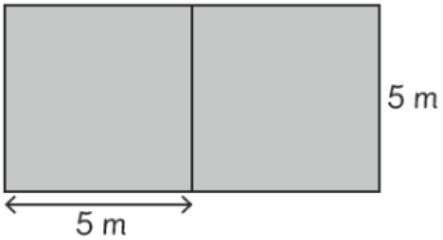


(d)

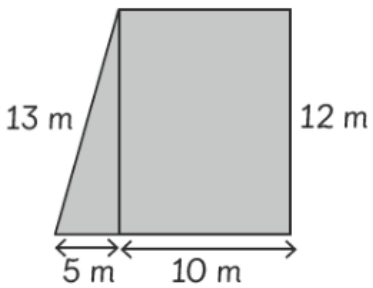


2. Find the perimeter of each figure. The squares in (a) are identical.

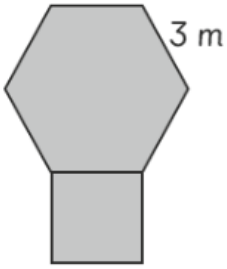
(a)



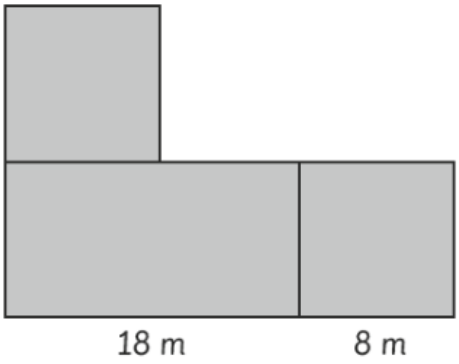
(b)



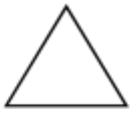
3. This figure is made up of a regular hexagon and a square. Find the perimeter of the figure.



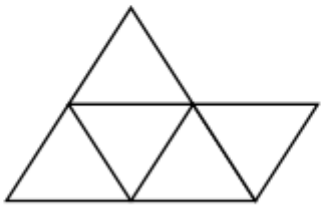
4. The two squares in the diagram are identical. What is the perimeter of the figure?



5. An equilateral triangle has a perimeter of 21 cm.



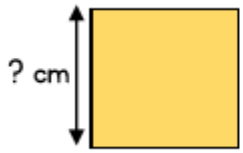
John uses the 5 of theses triangles to make this shape.

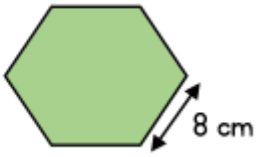


What is the perimeter of the new shape he has made?

YELLOW QUESTIONS

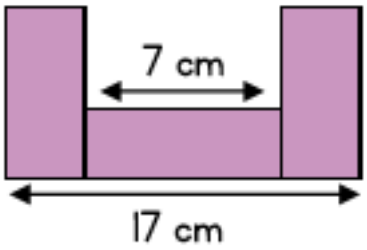
1.



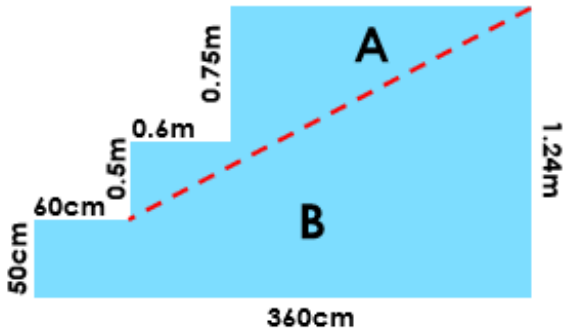


The square and the regular hexagon have the **same** perimeter.
Work out the length of one side of the square.

2. This shape is made up of three identical rectangles. Work out the perimeter of the shape.



3. Phillipa cuts along the **1.85m dotted line**. She thinks the new perimeters are: A = 6.1m and B = 7.79m.



Is Phillipa correct? Prove it.

4. Here is a square inside another square.

The perimeter of the inner square is 16 cm

The outer square's perimeter is four 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?

FRIDAY 26th JUNE – Complete the Friday quiz on perimeter.

It will be on the website on Thursday and answers will be sent automatically to Mrs Wren.