Maths Week 3

Starters – try doing one every day:

These starters are objectives that you have learnt in Year 5.

- Revise times tables (there is a 2do set on Purple Mash)
- Write down the first 10 cube numbers.
- Convert the following times to a 24hour clock:
  6:20am, 11:48pm, 9:15am, 1:35pm
- Multiply 234 by 10, 100, 1000 and 10,000.
- Divide 52930 by 10, 100, 1000 and 10,000.

Week 1 of 'Shape' (rectangles)

Task 1: L.O. To understand the properties of rectangles.

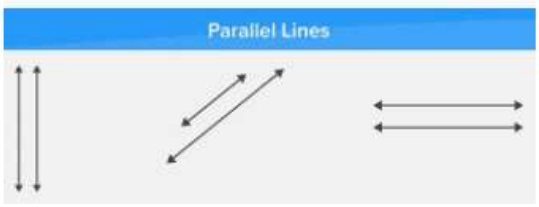
What can you tell me about this shape?

Use what you know to reason from known angles, such as 90 degrees in the corner of a rectangle.

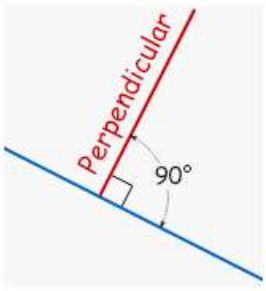
Knowledge:

A right angle is 90 degrees. Half a right angle is 45 degrees.

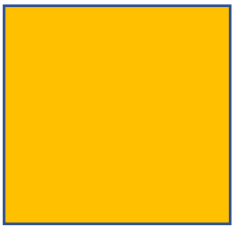
Where are the parallel lines?



Where are the perpendicular lines?



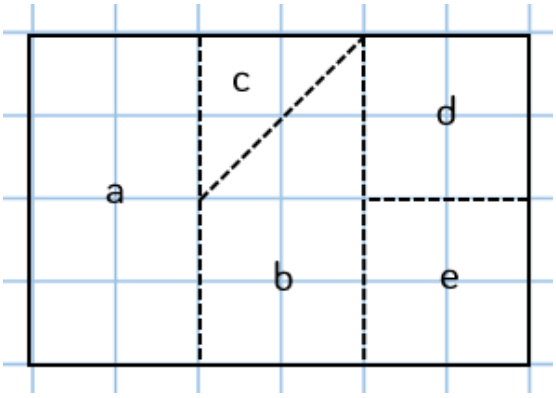
How is a square a special rectangle?

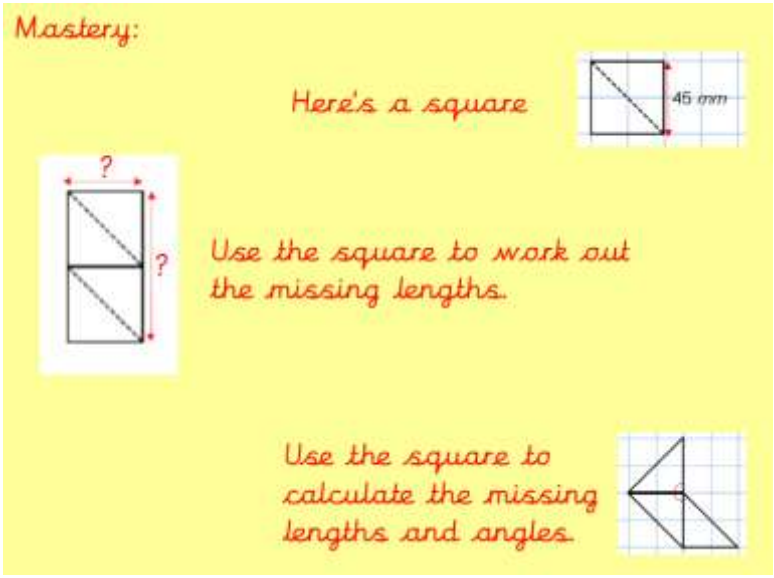


What is the same?
What is different?

Task 1

Using what we know we need to work out the angles. Calculate the size of the angles in each shape **(protractor not needed)**



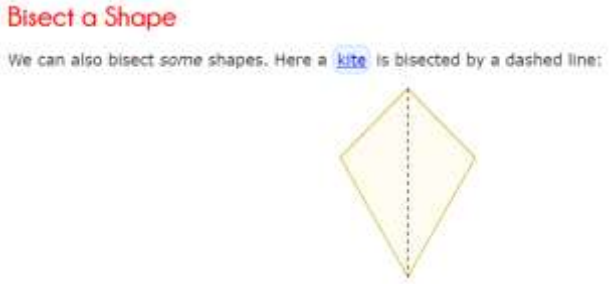


Knowledge: What does bisect mean?

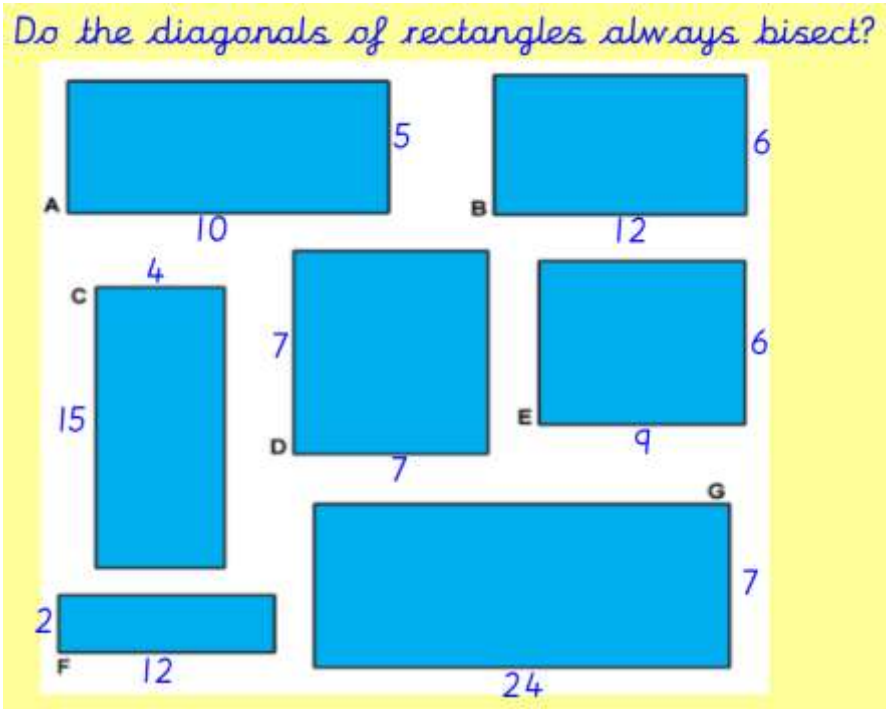
"Bisect" means to divide into two equal parts.

You can bisect lines, angles, and more.

The dividing line is called the "bisector"



Task 2



Draw the diagonals onto the rectangles. Is there more than 1 diagonal?

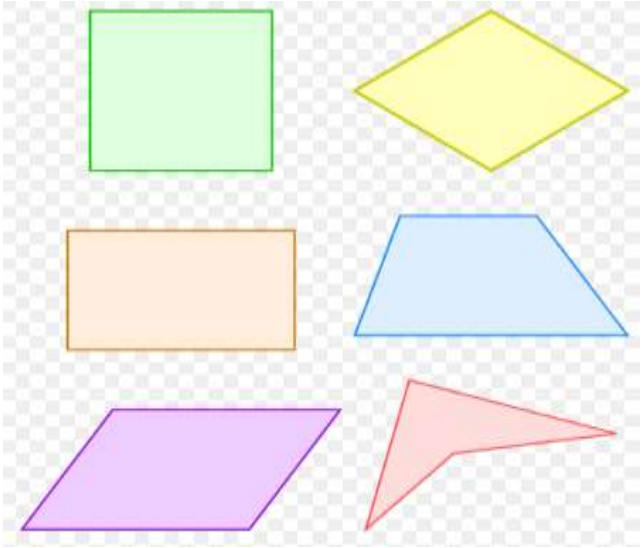
Knowledge: What is a quadrilateral?

Quadrilaterals

A shape with:

- four straight sides
- four angles – equal to 360 degrees
- four vertices (corners).

- Quad means four.
- Lateral means sides.



Interior Angles

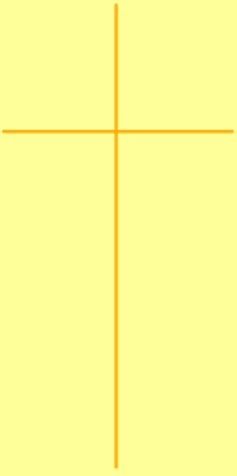
- **Interior angles:** An **interior angle** (or **internal angle**) is an angle formed by two sides of a simple polygon that share an endpoint

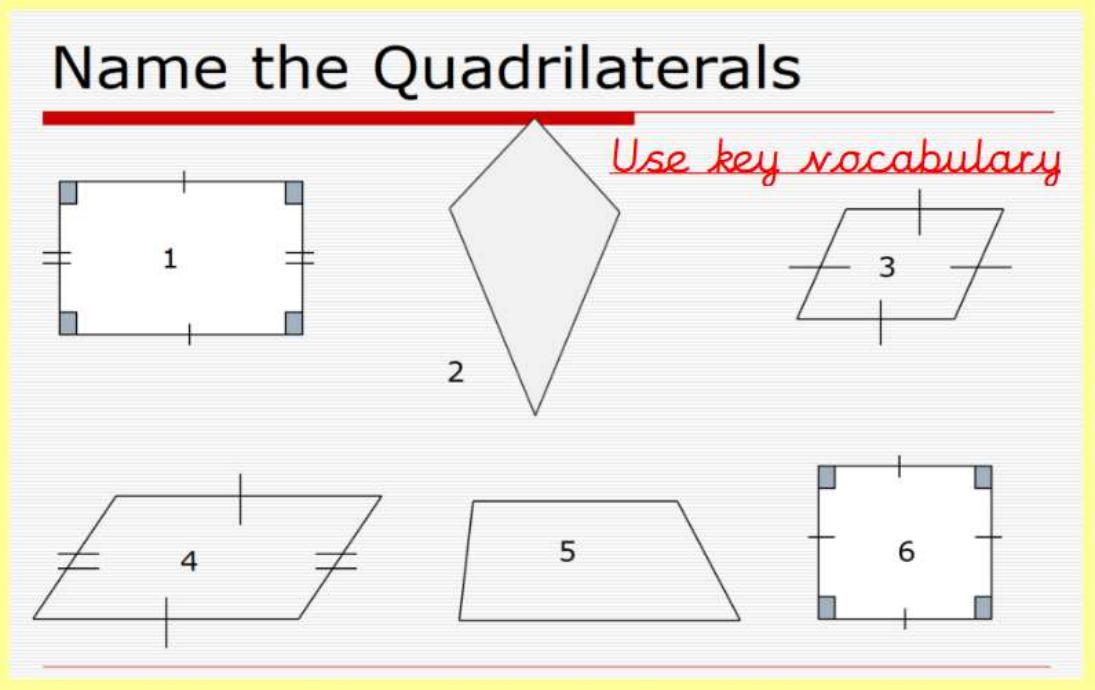
- Interior angles of a quadrilateral **always** equal 360 degrees

Task 3 – What quadrilateral will I make?

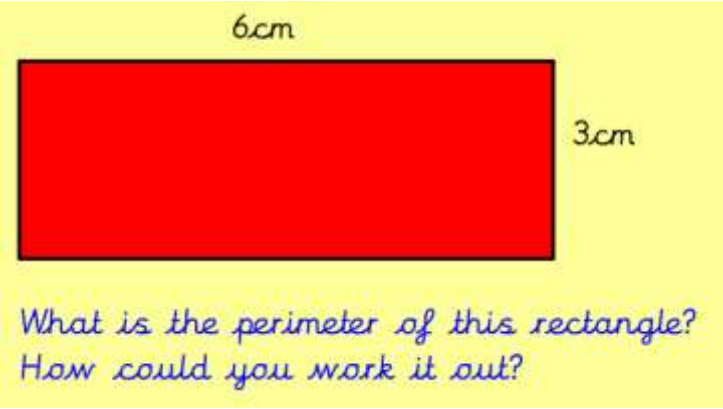
Talk task:

Join the adjacent corners.
What is my shape?
List the properties.

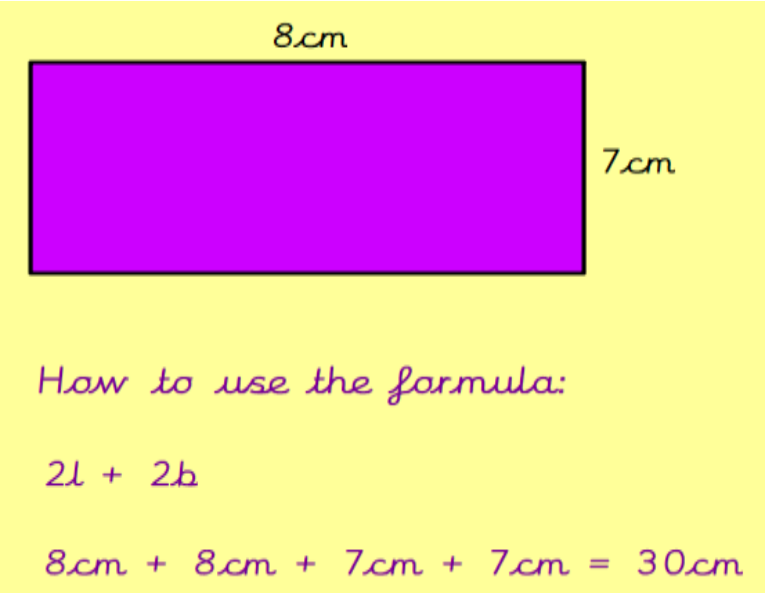




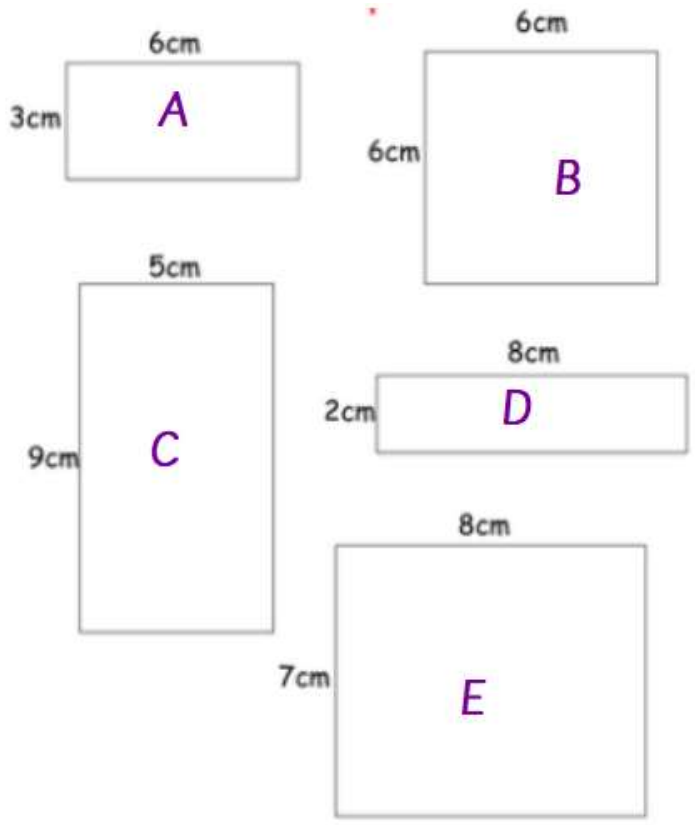
Task 4 - L.O. To use the properties of rectangles to deduce facts.



Knowledge: The perimeter is the distance around the edge of a shape.



Find the perimeter

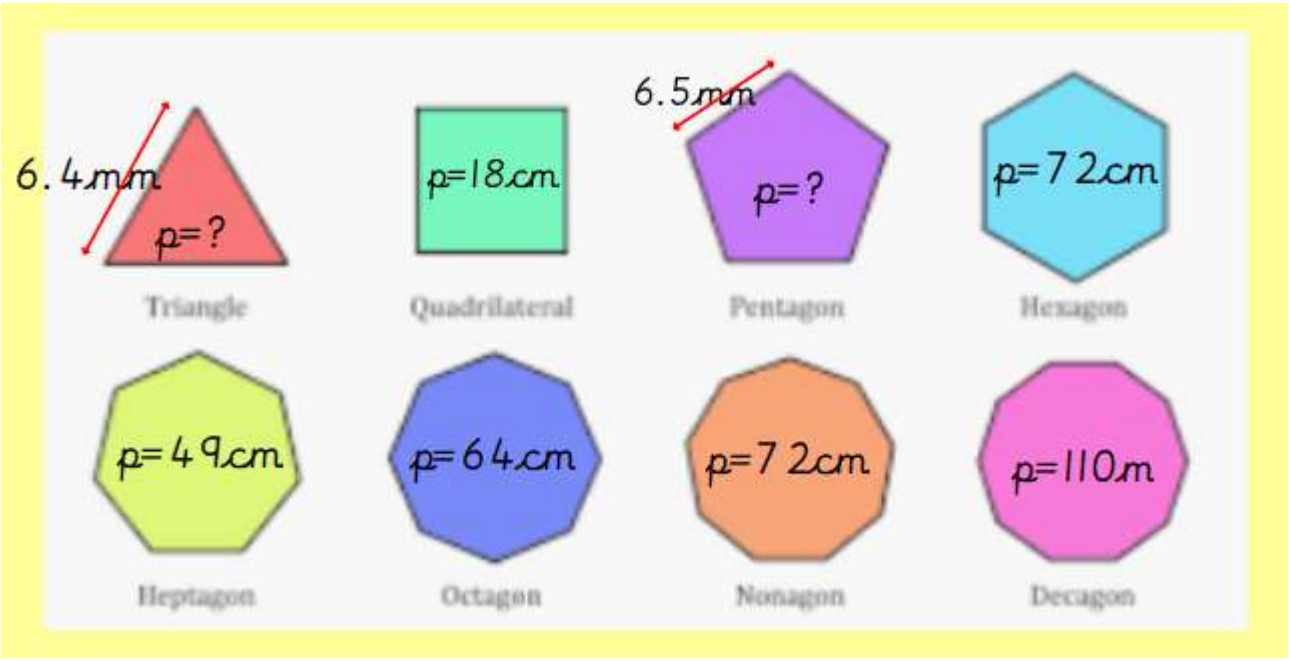


Challenge

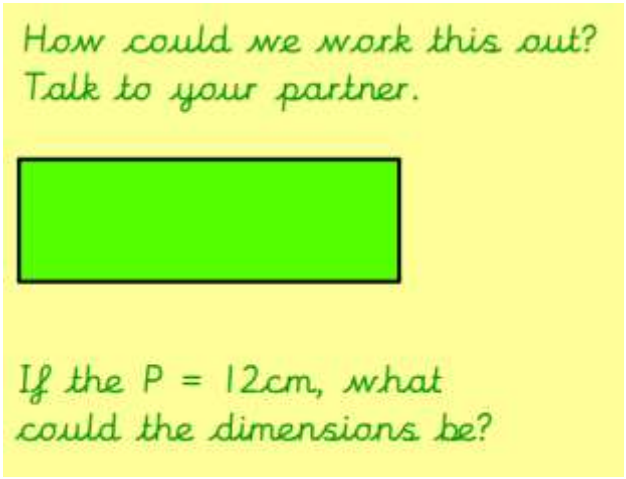
- The perimeter of the rectangle is 45cm.

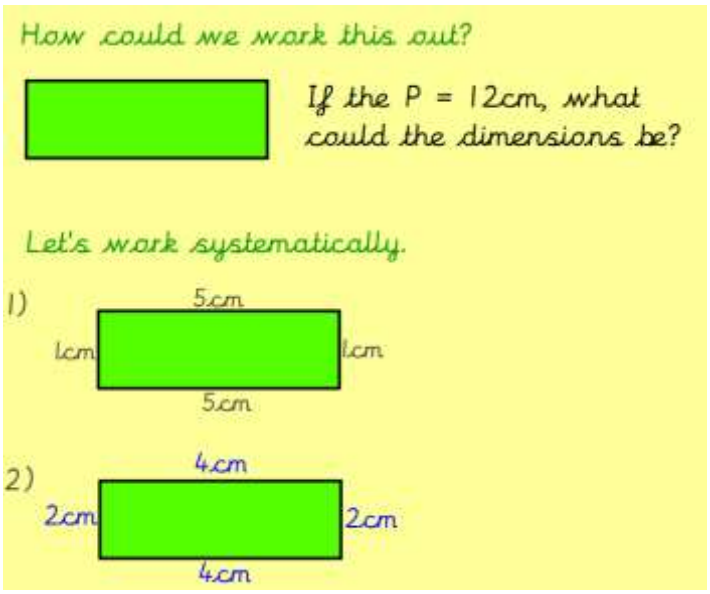
Find the length of the rectangle.

Task 5 – Use what you have just learnt to work out the lengths/perimeter of other polygons.



Challenge



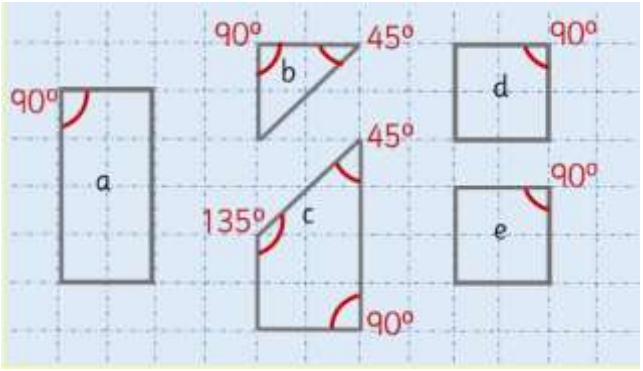


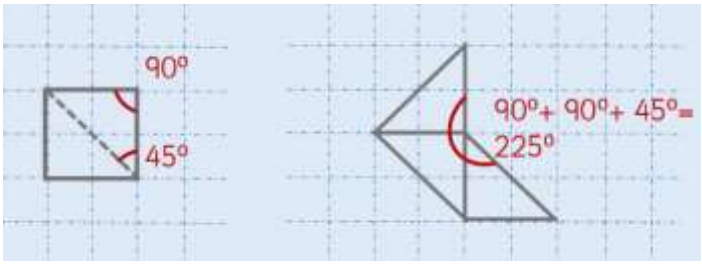
How many other options using whole numbers?

What if you worked to 1dp?

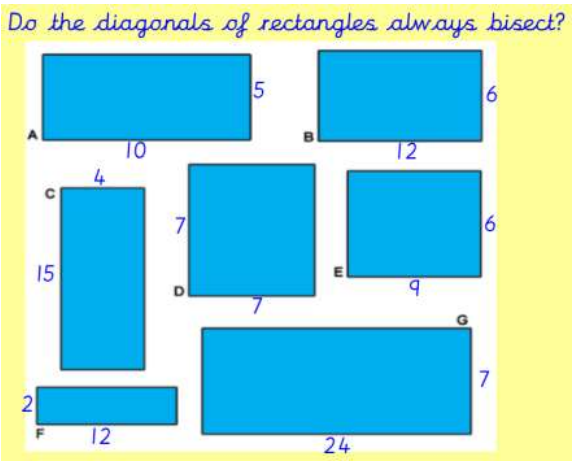
Answers:

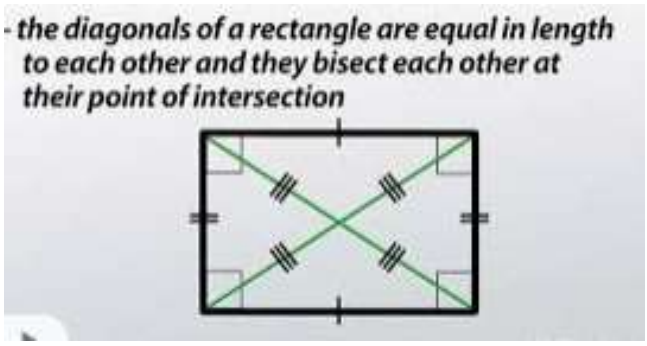
Task 1



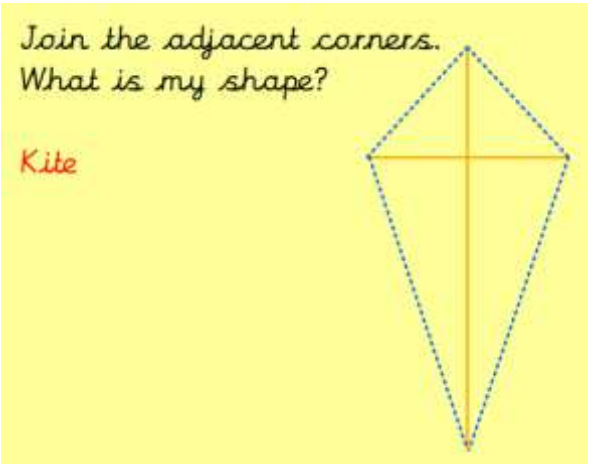


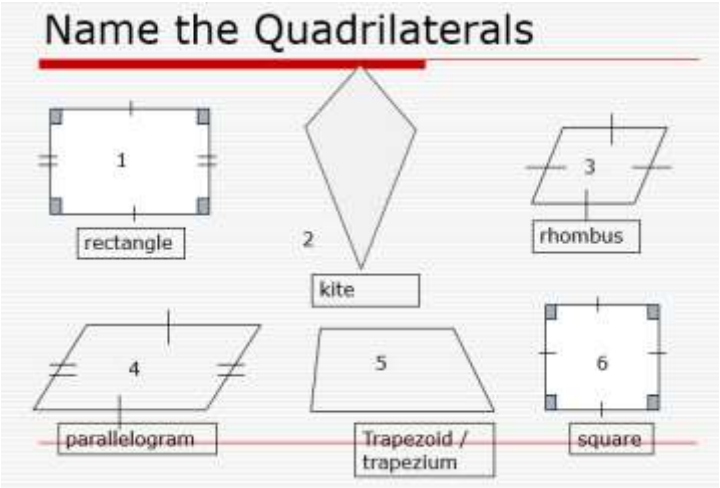
Task 2





Task 3





Task 4

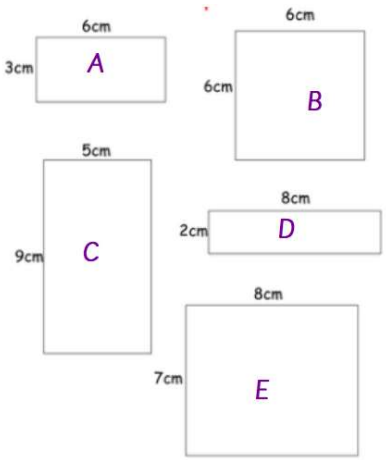
A= 18cm

B= 24cm

C= 28cm

D= 20cm

E= 30cm



Challenge

2 x 4.9 = 9.8cm

45cm – 9.8cm = 35.2cm

35.2 / 2 = 17.6cm

Length = 17.6cm

- The perimeter of the rectangle is 45cm.

4.9cm 

Find the length of the rectangle.

Task 5

Triangle perimeter = 19.2mm

Quadrilateral length = 4.5cm

Pentagon perimeter = 32.5mm

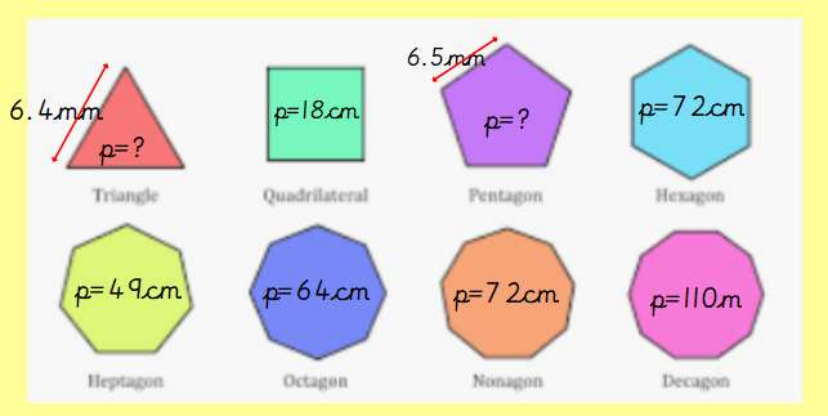
Hexagon length = 12cm

Heptagon length = 7cm

Octagon length = 8cm

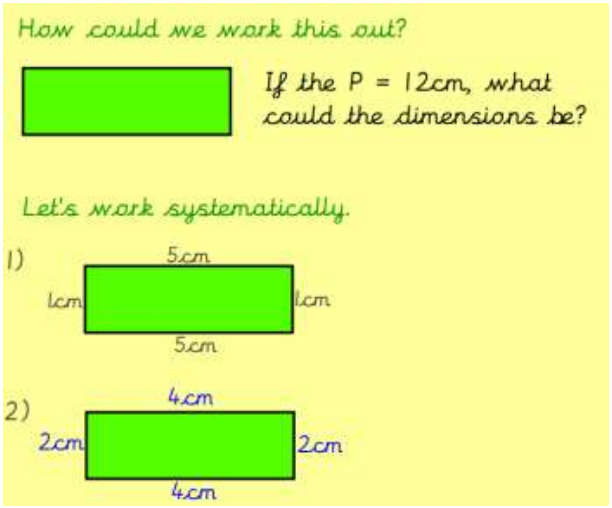
Nonagon length = 8cm

Decagon length = 11m



Challenge

How many other options using whole numbers?



What if you worked to 1dp?

L=5.9	W=0.1
5.8	0.2
5.7	0.3
5.6	0.4
5.5	0.5
5.4	0.6
5.3	0.7
5.2	0.8
5.1	0.9
5.0	1.0

continue the pattern…

L=4.9 W=1.1