

Please find something similar to a domino if you don't have one (a rubber, matchbox etc)

The RHC is to work out the area in these investigations.

### Area and perimeter investigations

Carry out each of the following investigations into area and perimeter.

#### Investigation A

Turn over a Domino.

The smallest number is the width in cm.  
The largest number is the length in cm.



Draw a rectangle using the numbers you have on the domino. (If you pick a domino with 0 spots, pick another)

- Work out the perimeter
- Work out the area

#### Investigation B

##### Challenge 1

See how many rectangles you can draw with a total area of  $24\text{cm}^2$  each.

##### Challenge 2

Calculate the perimeter of each of your shapes.

Do you notice anything? What can you tell me about your work today?



#### Investigation C

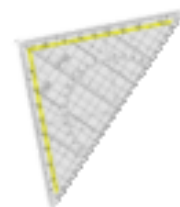
##### Challenge 1

See how many rectangles you can draw with a total area of  $48\text{cm}^2$  each.

##### Challenge 2

Calculate the perimeter of each of your shapes.

Tell me two facts about your work today.



The width of a rectangle is 2 metres less than the length.

The perimeter of the rectangle is between 20 m and 30 m.

What could the dimensions of the rectangle be?

Draw all the rectangles that fit these rules.

Use  $1 \text{ cm} = 1 \text{ m}$ .

Each of the shapes have a perimeter of 16 cm.  
Calculate the lengths of the missing sides.

The diagram shows two rectangles. The first is a green square with a bottom side labeled "4 cm" and a left side labeled "? cm". The second is a yellow rectangle with a top side labeled "? cm" and a right side labeled "2 cm".

## Always, Sometimes, Never

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

Prove it.