White Rose Maths
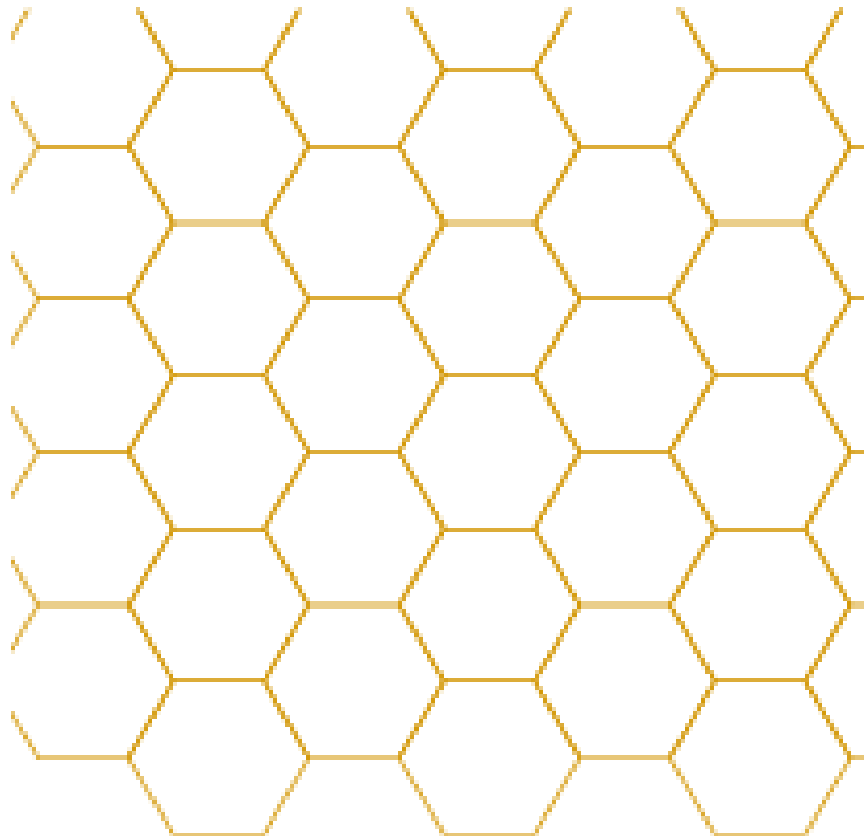
Year 5

Perimeter & Area

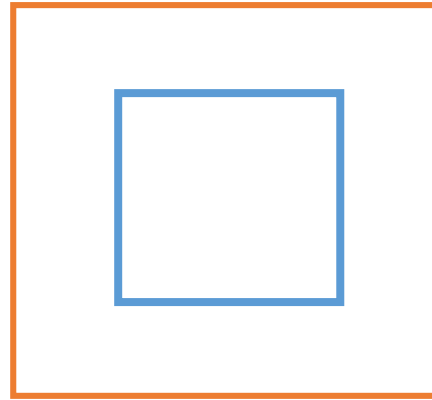Each regular hexagon has a side length of 2 cm

Can you construct a shape with a perimeter of 44 cm?

Activity

Investigate different ways you can make composite rectilinear shapes with a perimeter of 54 cm.

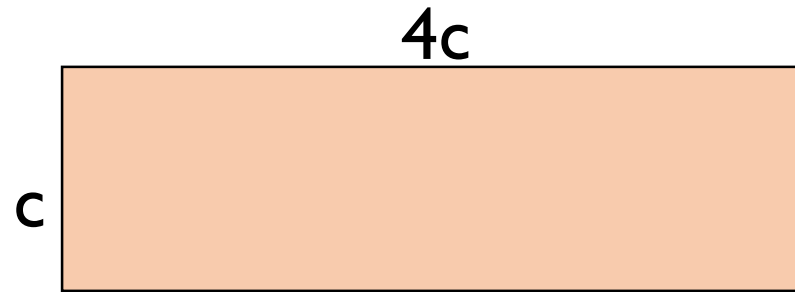Here is a square inside another square.

The perimeter of the inner square is 16 cm
The outer square's perimeter is four times the size of the inner square.
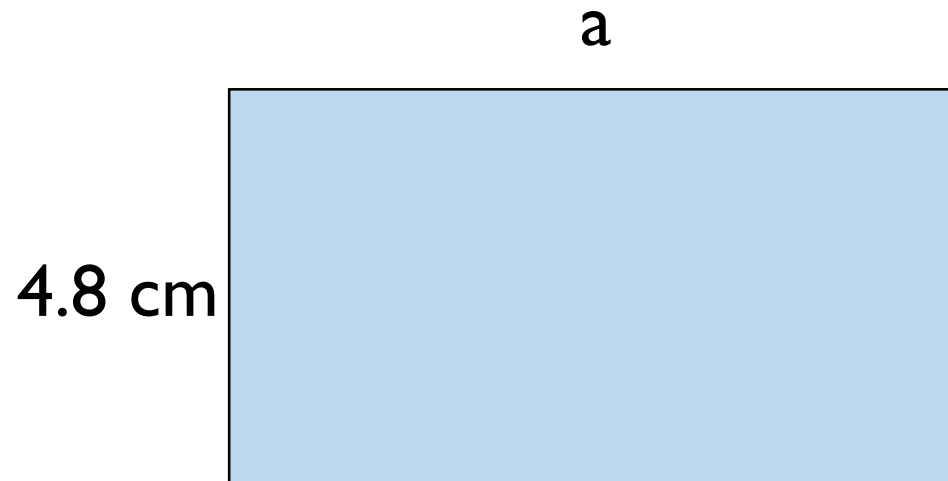What is the length of one side of the outer square?
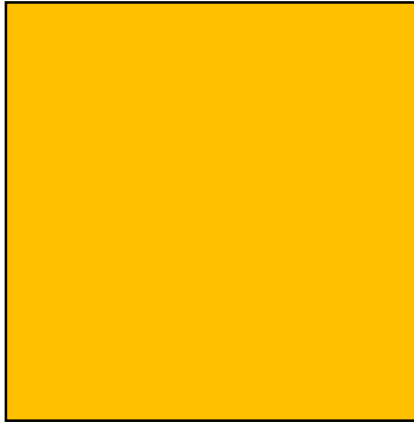How do you know? What do you notice?

The value of c is 14 m.

4c

c

What is the total perimeter of the shape?

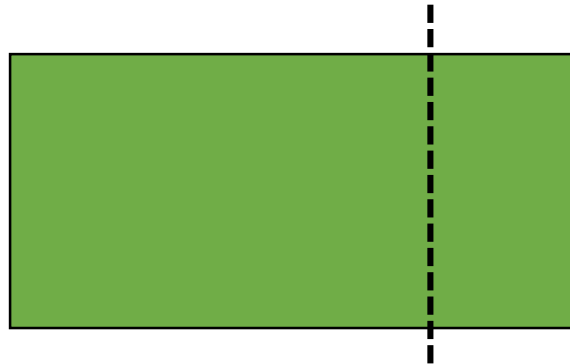The blue rectangle has a perimeter of 38 cm.

a

4.8 cm

What is the value of a?

Investigate how many ways you can make different squares and rectangles with the same area of 84 cm² What strategy did you use?
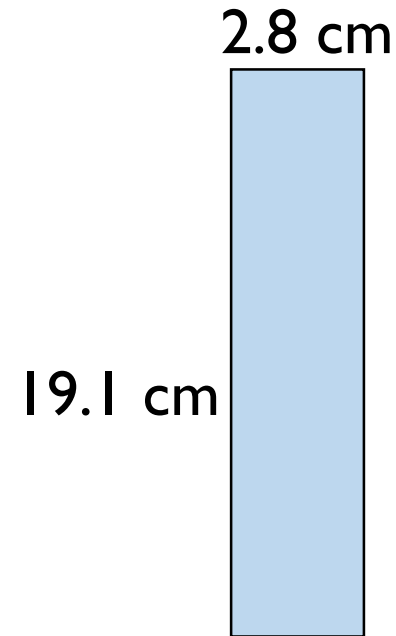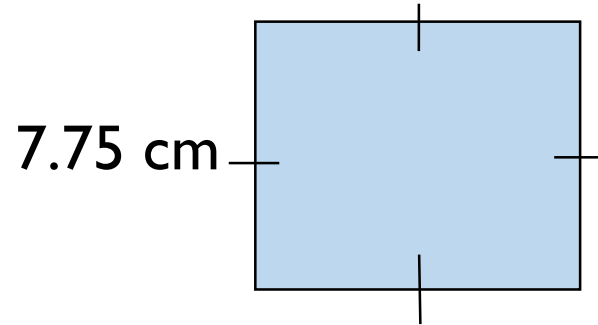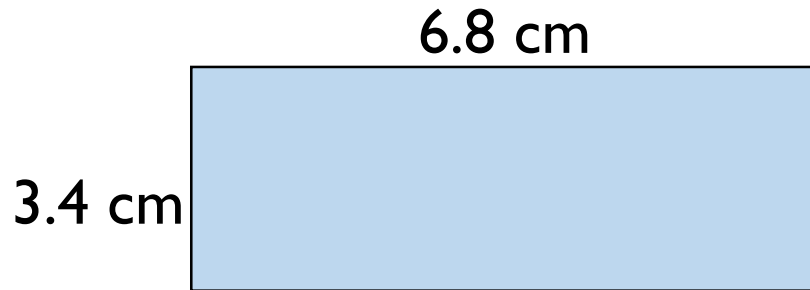
True or False?

If you cut off a piece from a shape, you reduce its area and perimeter.

Draw 2 examples to prove your thinking.

6.8 cm

3.4 cm

2.8 cm

19.1 cm

7.75 cm

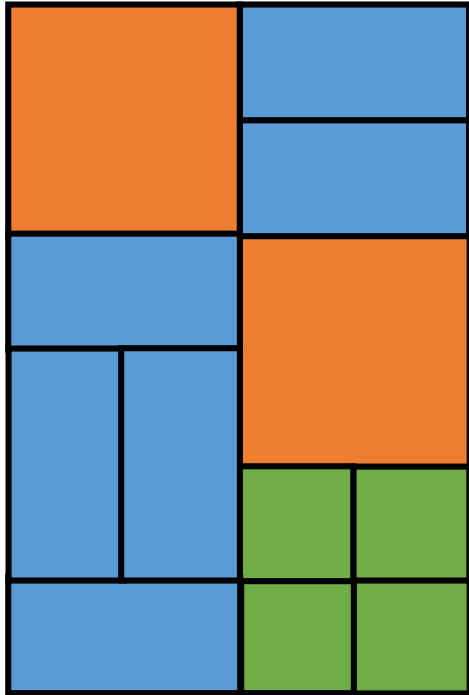Estimate the area of each shape and then order from largest to smallest.

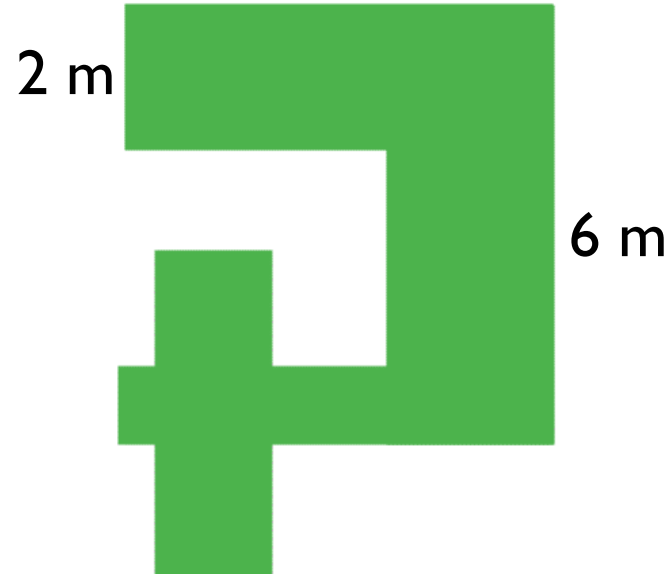Each orange square has an area of 24 cm².

Calculate the total orange area.

Calculate the blue area.

Calculate the green area.

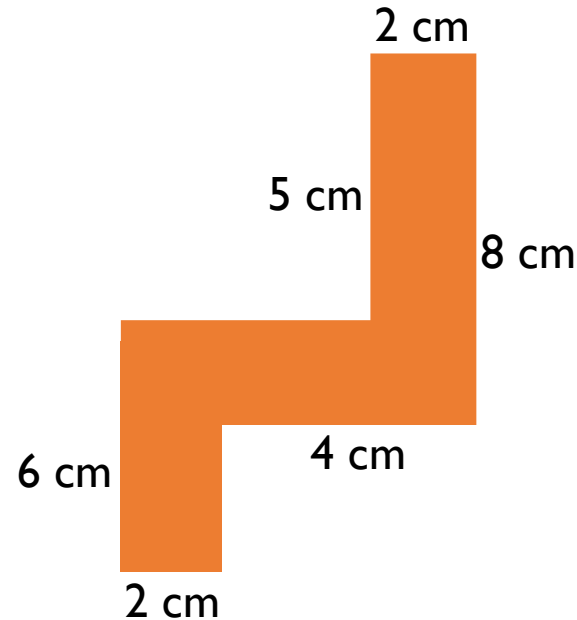What is the total area of the whole shape?

How many different ways can you split this shape to find the area?

2 m

6 m

Add more values and work out the area.

Jack says this shape has an area of 34 cm².

2 cm

5 cm

8 cm

6 cm

4 cm

2 cm

Show that Jack is correct.
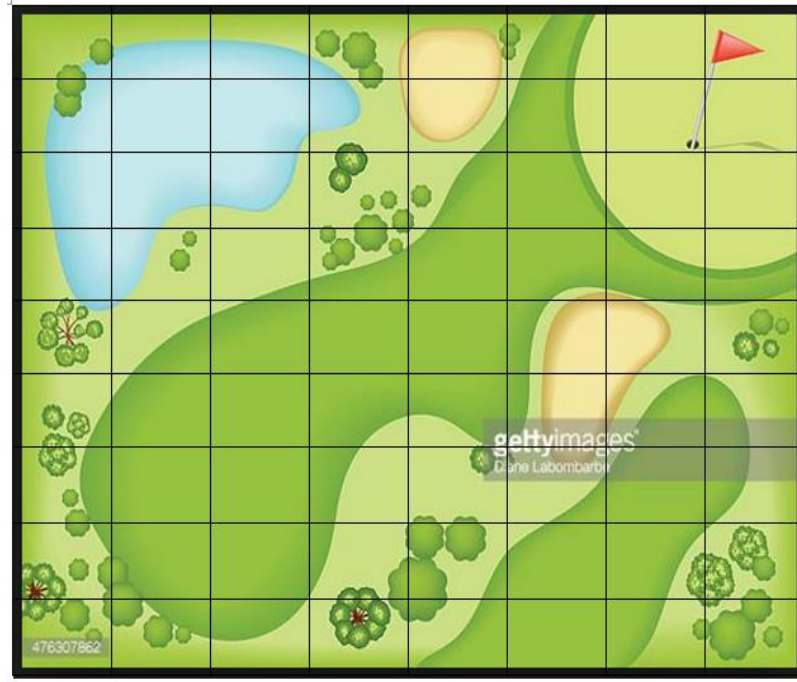
Find three more possible compound shapes that have an area of 34 cm².

Draw a circle on 1 cm^2 paper. What is the estimated area?

Can you draw a circle that has area approximately 20 cm^2?

If each square represents 3 m², what is the approximate area of:

- The lake
- The bunkers
- The fairway
- The rough
- Tree/forest area

Can you construct a 'Pirate Island' to be used as part of a treasure map for a new game? Each square represents 4 m².

The island must include the following features and be of the given approximate measure:

- Circular Island 180 m²
- Oval Lake 58 m²
- Forests with a total area of 63 m² (can be split over more than one space)
- Beaches with a total area of 92 m² (can be split over more than one space)
- Mountains with a total area of 57 m²
- Rocky coastline with total area of 25 m²