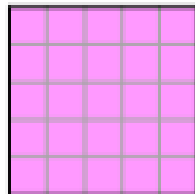## GREY GROUP

1a. Hafsa is buying wooden tiles for all the downstairs rooms in her house.

The area of each tile is 1m².
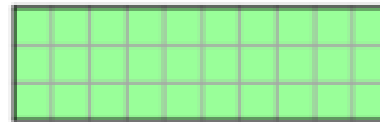
Hafsa thinks that she needs 25 tiles.
Is she correct? Explain your answer.

Not to scale

1b. Chuan is buying floor tiles for the school hall.
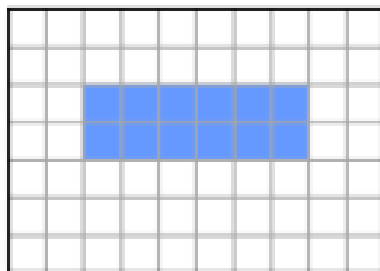
The area of each tile is 1m².

Chuan thinks he needs to order 27 tiles.
Is he correct? Explain your answer.

Not to scale

2a. This rectangle has an area of 12cm². Find other possible lengths and widths which give the same area.
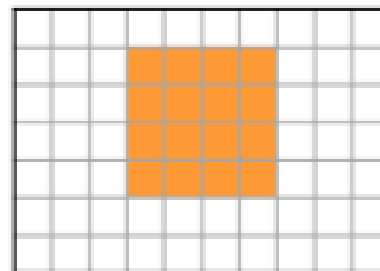
Find 2 possible answers.

Not to scale

2b. This rectangle has an area of 16cm². Find other possible lengths and widths which give the same area.
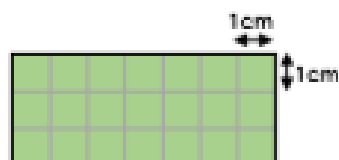
Find 2 possible answers.

Not to scale

3a. Lucy has calculated the area of a rectangle.

Lucy: The area of this rectangle is 20cm² because 3cm x 7cm = 20cm².

1cm
1cm

Is Lucy correct? Prove it.

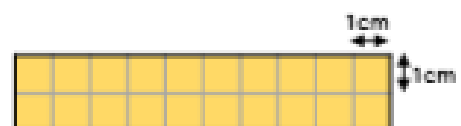*Not to scale*

3b. Cian has estimated the area of a rectangle.

Cian: The estimated area of this rectangle is 18cm² because 2cm x 9cm = 18cm².

1cm
1cm

Is Cian correct? Prove it.

Not to scale

GREEN GROUP

4a. Mrs Kelly is buying turf tiles for the playing field at school.

The area of each tile is 2m².
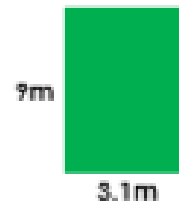
5m | 10m

Mrs Kelly thinks she needs to order 50 tiles.
Is she correct? Explain your answer.

Not to scale

4b. Ben is buying turf tiles for his garden.
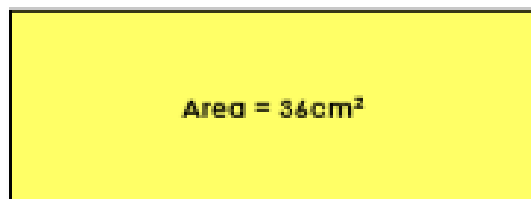
The area of each tile is 3m².

?m | 3.1m

Ben thinks he needs to order 9 tiles.
Is he correct? Explain your answer.

Not to scale

5a. A rectangle has an area of 36cm².
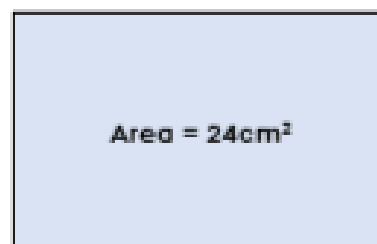What could the dimensions be?

Area = 36cm²

Find 3 possible answers.

Not to scale

5b. A rectangle has an area of 24cm².
What could the dimensions be?

Area = 24cm²

Find 3 possible answers.

Not to scale

6a. Sinead has estimated the area of a rectangle.

The estimated area of this rectangle is 96cm² because 8cm x 12cm = 96cm².

Sinead

8.7cm | 12.4cm

Is Sinead correct? Prove it.

Not to scale

6b. Josh has estimated the area of a rectangle.

The estimated area of this rectangle is 24cm² because 4cm x 6cm = 24cm².

Josh

3.8cm | 6.4cm

Is Josh correct? Prove it.

Not to scale

GOLD GROUP

7a. Gabriel is creating a mosaic that has an area of approximately 600cm². He wants to use two different tiles.

A — 5.5cm height, 50mm
B — 10cm

If he uses 10 of tile B, he thinks he will be able to use 3 tile A's in the remaining area.
Is he correct? Explain your answer.

Not to scale

7b. Isabel is creating a pattern that has an area of approximately 672cm². She wants to use two different tiles.

A — 4cm height, 80mm
B — 12cm

If she uses 5 of tile A, she thinks she will be able to use 8 tile B's in the remaining area.
Is she correct? Explain your answer.

Not to scale

8a. Two rectangles have a combined area of approximately 10cm².

What could the dimensions of each rectangle be?

The rectangles have different areas. At least one rectangle has a side which is a decimal number.

Find 3 possible answers.

Not to scale

8b. Two rectangles have a combined area of approximately 25m².

What could the dimensions of each rectangle be?

The rectangles have different areas. At least one rectangle has a side which is a decimal number.

Find 3 possible answers.

Not to scale

9a. Alice has made a large rectangle using multiples of the rectangles below.

Alice: I can use six rectangles to create a large rectangle with an approximate area of 96cm².

A — 10mm, 12.1cm
B — 3.2cm, 5.6cm

Is Alice correct? Prove it.

Not to scale

9b. Johnny has made a large rectangle using multiples of the rectangles below.

Johnny: I can use nine rectangles to create a large rectangle with an approximate area of 128cm².

B — 2.4cm, 44mm
A — 23mm, 7.8cm

Is Johnny correct? Prove it.

Not to scale