Correspondence problems

1 A canteen has 2 types of bread and a choice of 3 sandwich fillings.

Bread	Fillings
white brown	cheese tuna chicken

a) List the different sandwiches that can be made.

One has been done for you.

cheese on white

b) Complete the multiplication to represent the number of different combinations of bread and filling.

☐ × ☐ = ☐

Complete the sentence.

There are ☐ combinations.

c) How many combinations would there be if there were 4 choices of sandwich filling?

☐

2 A pizzeria offers a choice of bases and toppings.

Pizza base	Toppings
deep pan	mushrooms
thin	chicken
	onion
	peppers
	sweetcorn

Complete the multiplication to work out how many different combinations of pizza there are.

☐ × ☐ = ☐

Complete the sentence.

There are ☐ combinations of pizza.

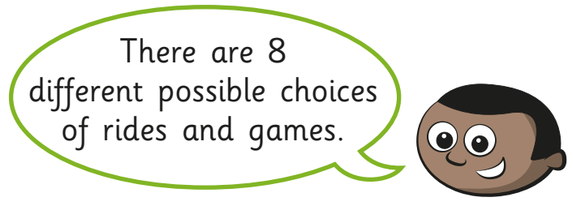
3 Mo visits the funfair.

He buys a ticket that allows him to choose 1 ride and 1 game at the fair.

Rides
Big dipper
Dodgems
Carousel

Games
Hook-a-duck
Basketball
Coconut shy
Lucky dip
Test-your-strength

a)



Is Mo correct? _____

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Explain your answer.

He has done 3 + 5 not 3 × 5

b) List all the different choices Mo can make.

BH BB BC BL BT

DH DB DC DL DT

CH CB CC CL CT

Mo can make [15] different choices.

4 Aisha has 3 headbands and 5 hair slides.

Kim has 2 headbands and 6 hair slides.

Who has more choices of combinations for wearing one headband and 1 slide?

Aisha has more choices.

Talk about it with a partner.

5 Here are the activity choices available at Summer Camp.

Sport	Arts and crafts	Outward bound
football	painting	wall climbing
tennis	pottery	kayaking
golf	mosaics	abseiling
	origami	

Each child is allowed to choose 3 activities per day:
1 sport, 1 arts and crafts and 1 outward bound.

a) How many activity combinations are there?

[36]

b) Due to a flooded pitch, football is cancelled.

How many combinations are now possible?

There are [24] combinations.

6 Tom and Esther are building a snowman.

They have a choice of 5 hats, 4 scarves and 2 pairs of gloves to dress their snowman.

How many different combinations are possible?

[5] × [4] × [2] = [40]

There are [40] combinations.

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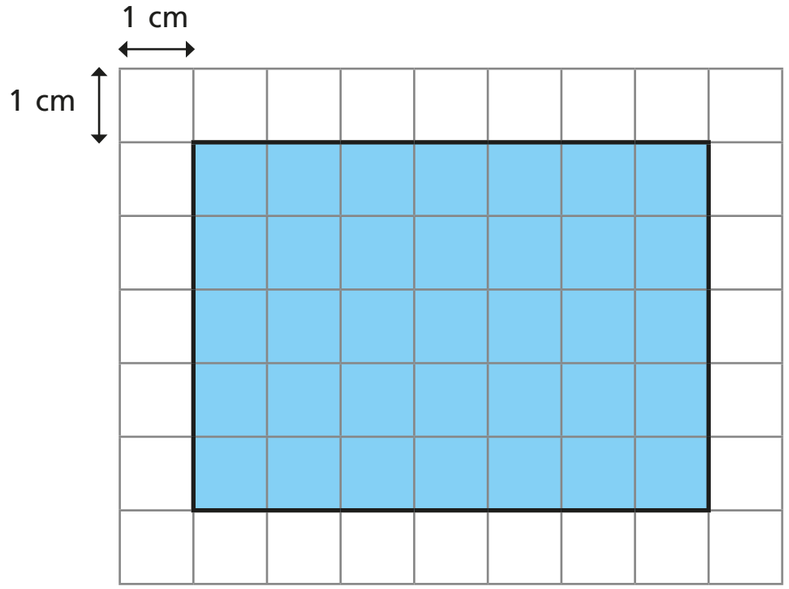
Perimeter of a rectangle

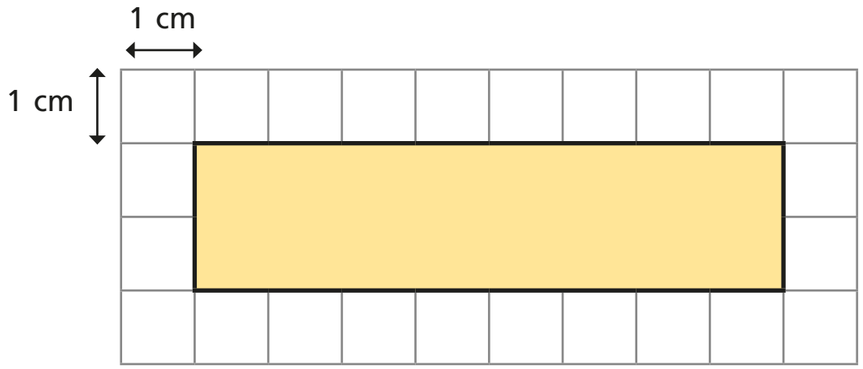
1 Work out the perimeter of each rectangle.

a)



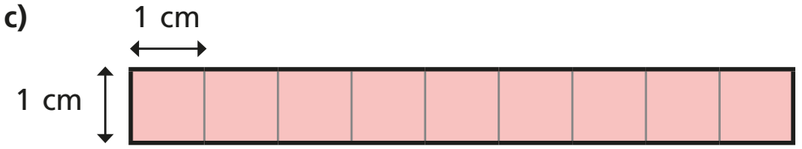
5 cm + 7 cm + 5 cm + 7 cm = 24 cm

b)



2 cm + 8 cm + 2 cm + 8 cm = 20 cm

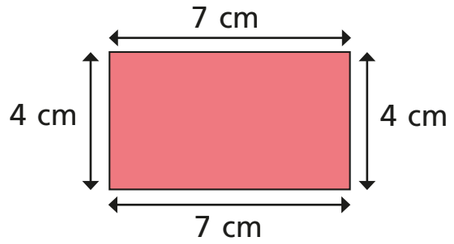
c)



1 cm + 9 cm + 1 cm + 9 cm = 20 cm

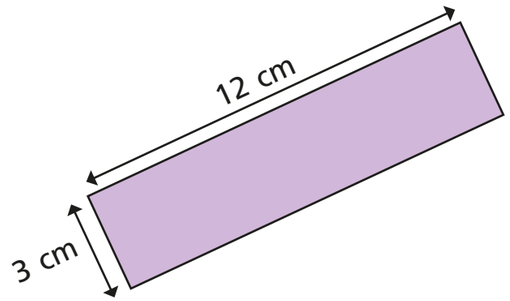
2 Work out the perimeter of the rectangles.

a)



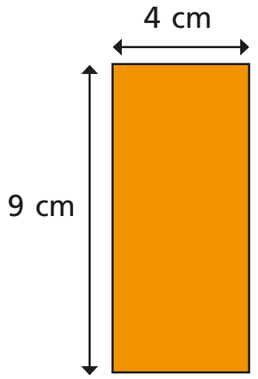
22cm

b)



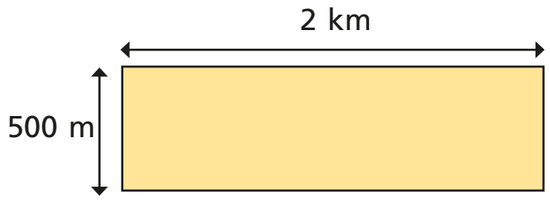
30cm

c)



26cm

d)



5km

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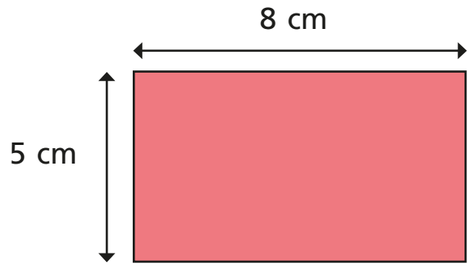
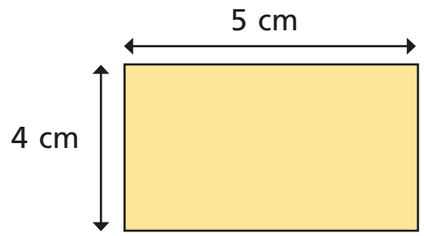
3 Tommy is working out the perimeter of some rectangles.



8 cm + 5 cm = 13 cm
13 cm × 2 = 26 cm

Use Tommy's method to find the perimeter of these rectangles.

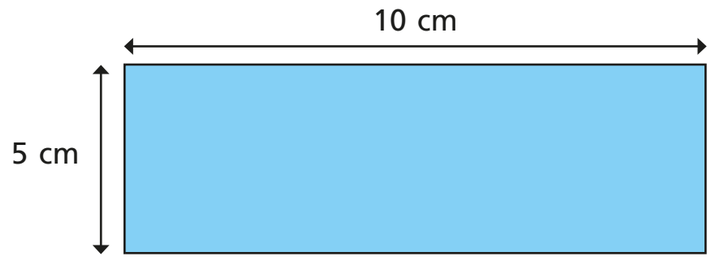
a)



5 cm + 4 cm = 9 cm

9 cm × 2 = 18 cm

b)

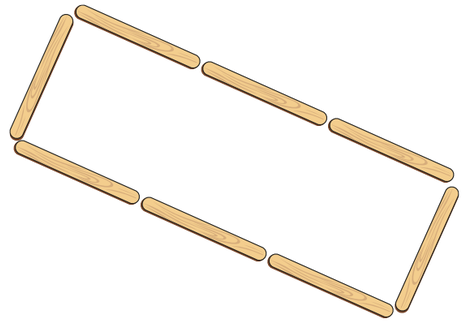


10 cm + 5 cm = 15 cm

15 cm × 2 = 30 cm

4 Each lolly stick is 8 cm long.

Find the perimeter of the shape.

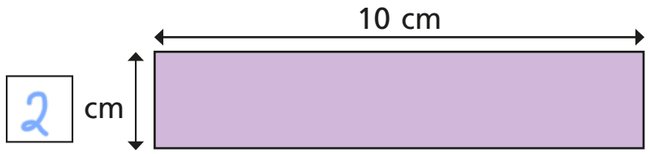


64 cm

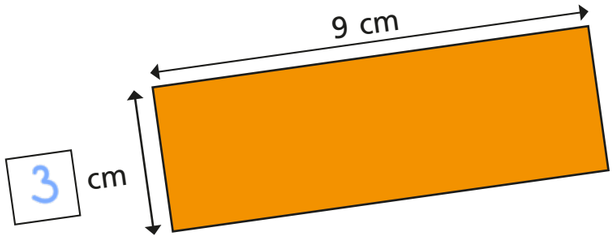
5 Each of these rectangles has a perimeter of 24 cm.

Work out the missing lengths and label the diagrams.

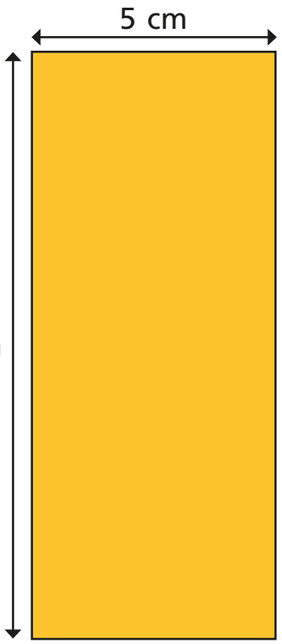
a)



b)



c)



What do you notice?

Find any other rectangles that have the same perimeter.

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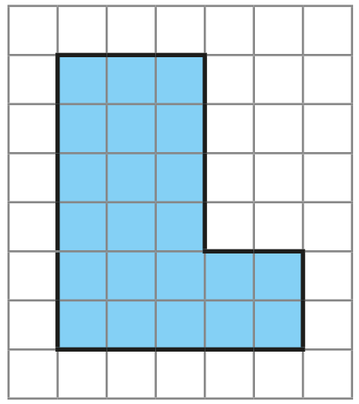
Perimeter of rectilinear shapes

1 The length of each square on the grid is 1 cm.

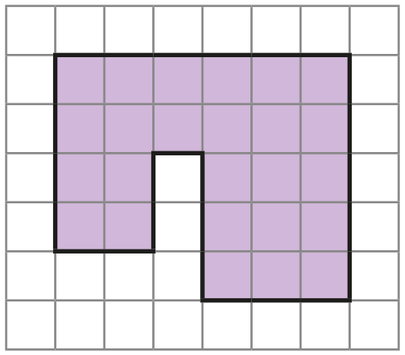
Work out the perimeter of the shapes.

a)



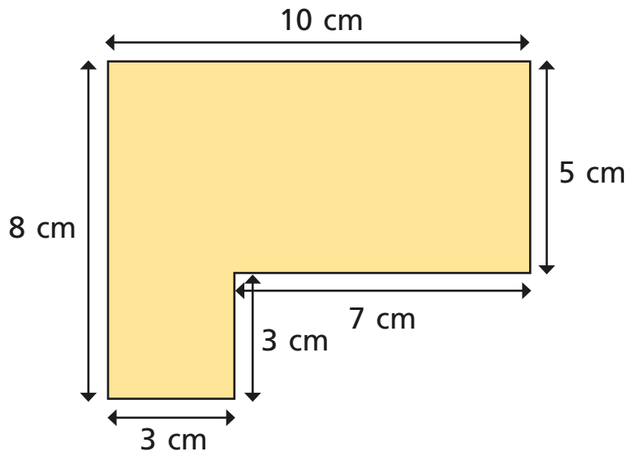
22 cm

b)



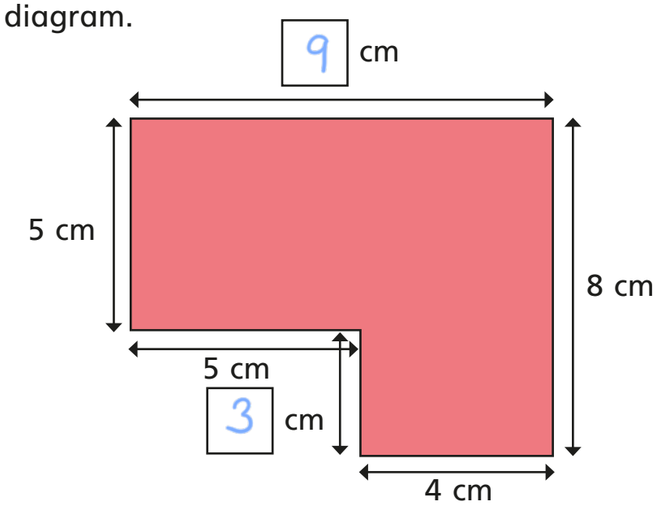
26 cm

2 Work out the perimeter of the shape.



36 cm

3 **a)** Work out the missing lengths and label them on the diagram.

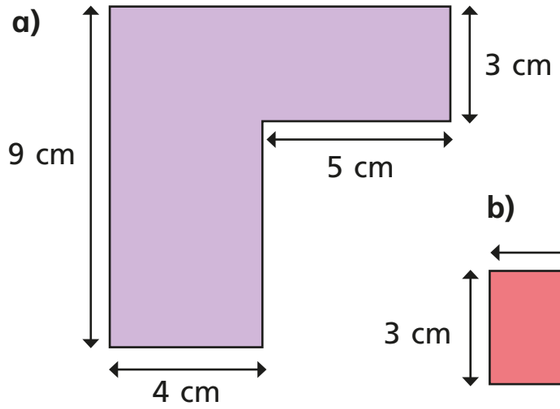


b) What is the perimeter of the shape?

36 cm

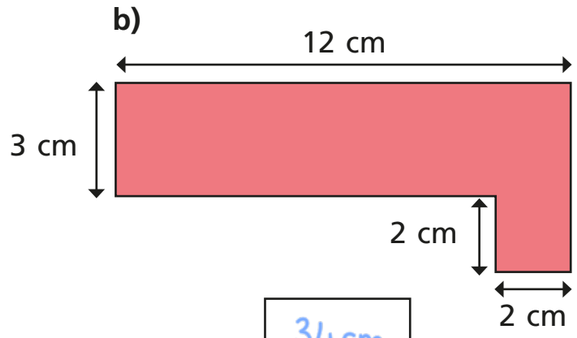
4 Work out the perimeter of each shape.

a)



36 cm

b)



34 cm

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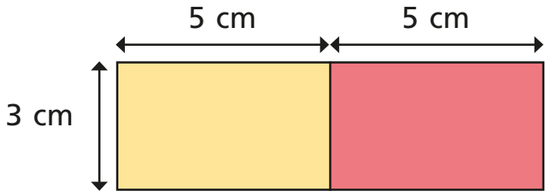
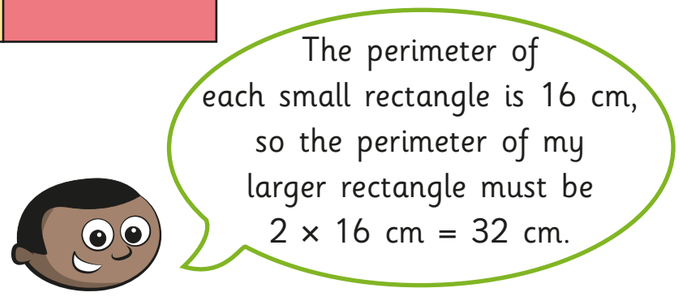
5 Mo puts two 5 cm by 3 cm rectangles next to each other.





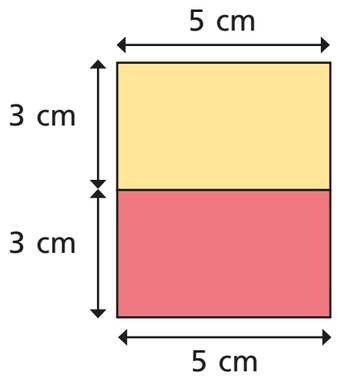
a) Is Mo correct? No

Work out the perimeter of the larger rectangle to check your answer.

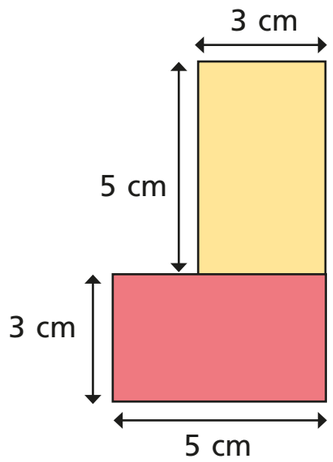
26 cm

b) Mo puts the rectangles together in different ways.

Work out the perimeter of each large shape.

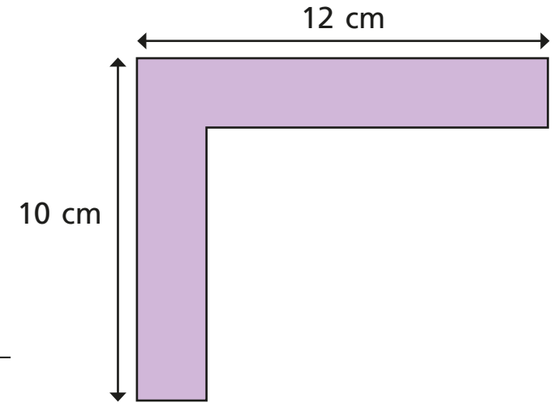


22 cm



26 cm

6 Dani thinks there isn't enough information to work out the perimeter of the shape.

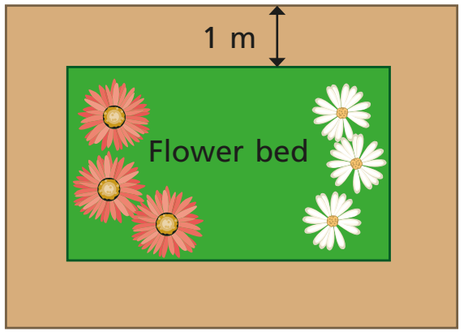


Is Dani correct? No

Explain your answer.

7 A rectangular flower bed is 5 m long and 3 m wide.

The path around the flower bed is 1 m wide.



a) What is the perimeter of the flower bed?

16 cm

b) What is the perimeter of the outside of the path?

24 cm

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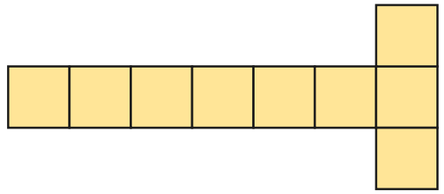
Counting squares

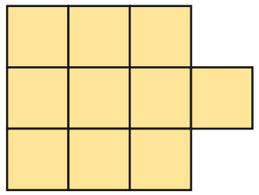
1 Count the squares in each shape to find the area.

A



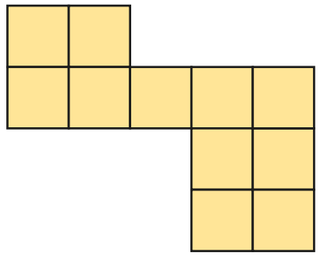
The area is 9 squares.

B



The area is 10 squares.

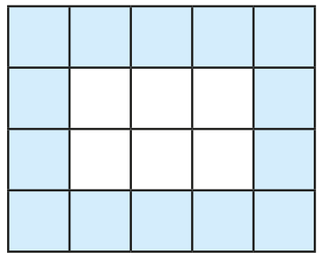
C



The area is 11 squares.

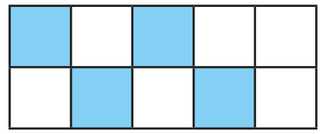
Which shape has the greatest area? C

2 What is the area of the shaded part of the shape?



The area is 14 squares.

3 Here is a kitchen tile.

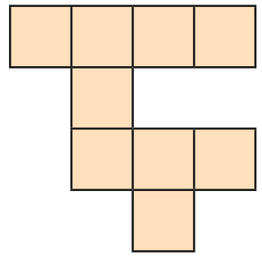


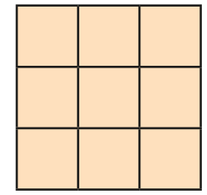
a) What area of the tile is blue? 4 squares

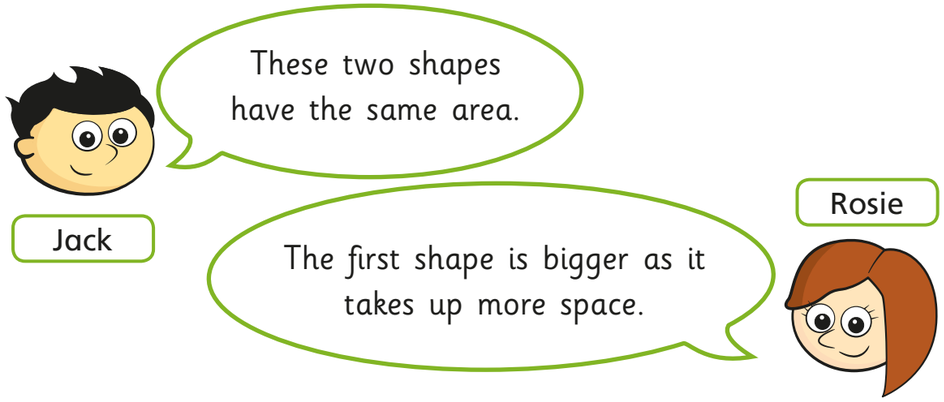
b) What area of the tile is white? 6 squares

c) What is the total area of the tile? 10 squares

4 These two shapes are made up of squares of the same size.







Who is correct? Jack

Explain how you know.

They both have an area of 9 squares.

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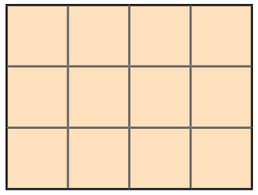
5 Here is a rectangle.

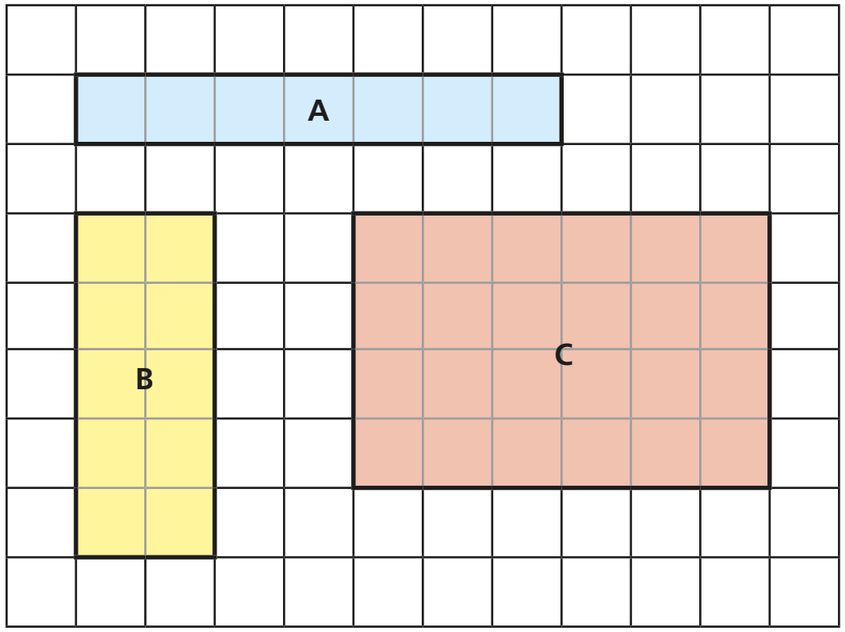


a) The rectangle has [3] rows and [4] columns.

b) What is the area of the rectangle? [12] squares

c) How did you work out the area?

6 Find the area of each rectangle.

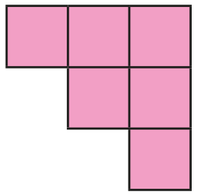


A = [7] squares **B** = [10] squares **C** = [24] squares

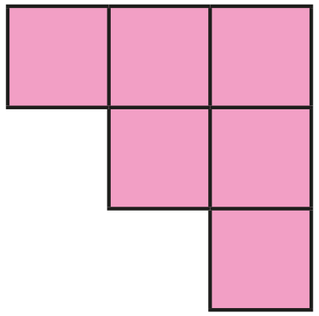
7 Nijah and Eva are making shapes.

They each use 6 squares.

Nijah's shape



Eva's shape



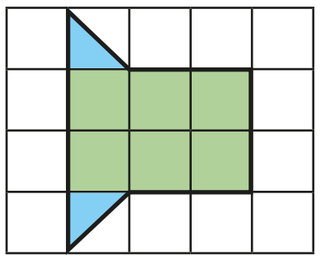
The area of Nijah's shape is equal to the area of Eva's shape.

Is this true or false? [False]

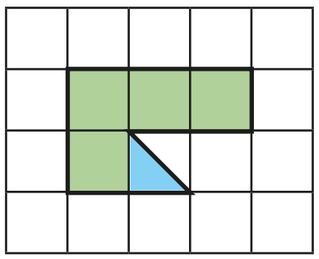
How do you know?

[They are not made using the same size shapes.]

8 What is the area of each shape?



area = [7] squares



area = [4 ½] squares

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