

Week 3 13.3.23

STARTER TASK Tues



Menu

Week 7 Day 1

Fluency

Complete these questions.

1. $1093 - 100 =$

Reveal answer

2. $= 3.004 + 38.4$

Reveal answer

3. $3000 \div 40 =$

Reveal answer

4. $\frac{5}{6} \times \frac{1}{3} =$

Reveal answer

5. $\frac{3}{4} - \frac{2}{16} =$

Reveal answer

6. $4504 + 12\,394 =$

Reveal answer

Problem Solving

Write the three missing digits to make this addition correct.

$$\begin{array}{|c|c|c|} \hline \square & 5 & \square \\ \hline + & 3 & \square \\ \hline 8 & 4 & 6 \\ \hline \end{array}$$

Reveal answer

Reasoning

$$1311 \div 23 = 57$$

Prove it!

Fluency

Complete these questions.

1. $1093 - 100 =$ [Reveal answer](#)
2.

--

 $= 3.004 + 38.4$ [Reveal answer](#)
3. $3000 \div 40 =$ [Reveal answer](#)
4. $\frac{5}{6} \times \frac{1}{3} =$ [Reveal answer](#)
5. $\frac{3}{4} - \frac{2}{16} =$ [Reveal answer](#)
6. $4504 + 12\,394 =$ [Reveal answer](#)

Fluency

Complete these questions.

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 $= 3.004 + 38.4$ [Reveal answer](#)
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6. $4504 + 12\,394 =$ [Reveal answer](#)

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1. $1093 - 100 =$ [Reveal answer](#)
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Problem Solving

Write the three missing digits to make this addition correct.

	5	
+	3	
8	4	6

[Reveal answer](#)

Reasoning

$1311 \div 23 = 57$
Prove it!

Problem Solving

Write the three missing digits to make this addition correct.

	5	
+	3	
8	4	6

[Reveal answer](#)

Reasoning

$1311 \div 23 = 57$
Prove it!

Problem Solving

Write the three missing digits to make this addition correct.

	5	
+	3	
8	4	6

[Reveal answer](#)

Reasoning

$1311 \div 23 = 57$
Prove it!

Fluency

Complete these questions.

1. $1093 - 100 = 993$ [Reveal answer](#)

2. $41.404 + 3.004 + 38.4$ [Reveal answer](#)

3. $3000 \div 40 = 75$ [Reveal answer](#)

4. $\frac{5}{6} \times \frac{1}{3} = \frac{5}{18}$ [Reveal answer](#)

5. $\frac{3}{4} - \frac{2}{16} = \frac{5}{8}$ [Reveal answer](#)

6. $4504 + 12\,394 = 16\,898$ [Reveal answer](#)

Problem Solving

Write the three missing digits to make this addition correct.

$$\begin{array}{r} \boxed{4} \boxed{5} \boxed{4} \\ + \boxed{3} \boxed{9} \boxed{2} \\ \hline 8 \quad 4 \quad 6 \end{array}$$

[Reveal answer](#)

Reasoning

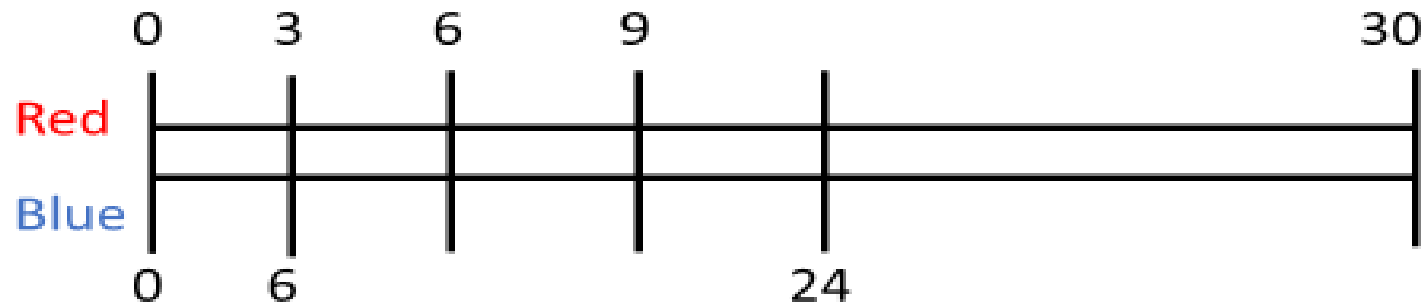
$$1311 \div 23 = 57$$

Prove it!

Tues 14.3.23

LO: To solve proportion problems

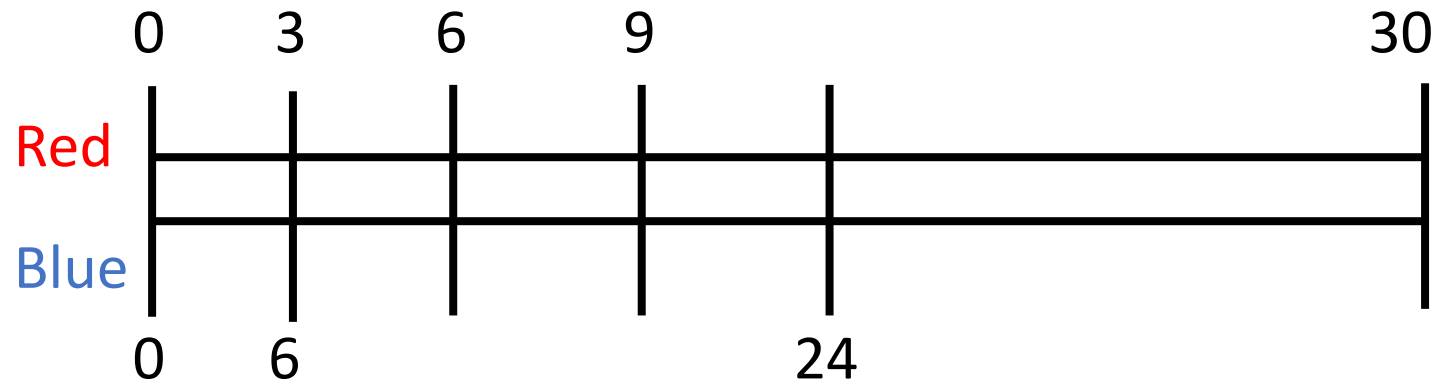
1) For every 3 red counters there are 6 blue counters.



Whiteboards

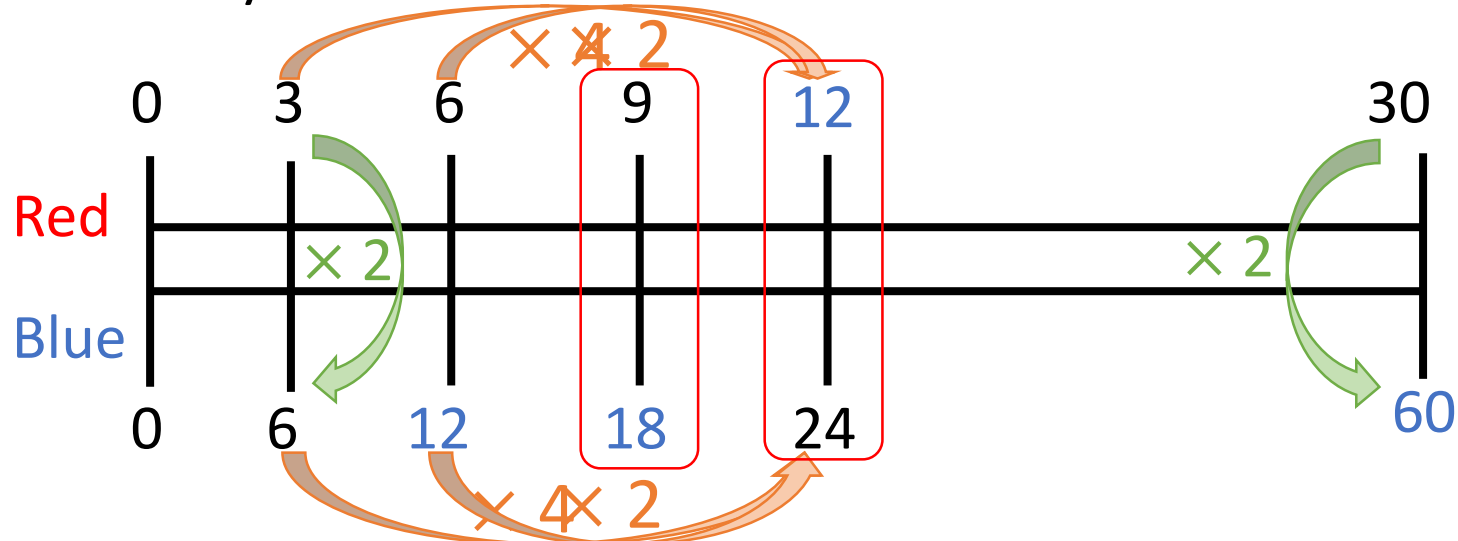
- Complete the double number line.
- If there are 9 red counters, how many blue counters are there?
- If there are 24 blue counters, how many red counters are there?

1) For every 3 red counters there are 6 blue counters.



- a) Complete the double number line.
- b) If there are 9 red counters, how many blue counters are there?
- c) If there are 24 blue counters, how many red counters are there?

1) For every 3 red counters there are 6 blue counters.



a) Complete the double number line.

b) If there are 9 red counters, how many blue counters are there? 18

c) If there are 24 blue counters, how many red counters are there? 12

Term Spring 1 Week beginning 6/2/23

Block Ratio

Key vocabulary ratio proportion

for every...there are

part whole scale factor enlargement

similar length width perimeter

	B	W	S
Add or multiply			
Use ratio language			
Introduction to the ratio symbol			
Ratio and fractions			
Scale drawing			
Use scale factors			
Similar shapes			
Ratio problems			

Stem sentences

- For every, there are
- If there were, there would be
- A common factor of and is
- For every, there are , which can be written as
- The ratio of to is :
- In the ratio : , the first number represents and the second number represents
- The ratio of to is :
- There are parts altogether.

Maths Three Repeating Golden Threads



Fluency

Quick and. efficient recall of facts and procedures

Mastery

Pupils acquire a deep, long-term, secure adaptable understanding

Application

The use of maths everyday in the real world, outside the classroom.



Mon

Crucial Vocab

ratio

scale

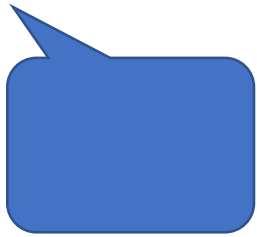
scale factor

represents

reduced

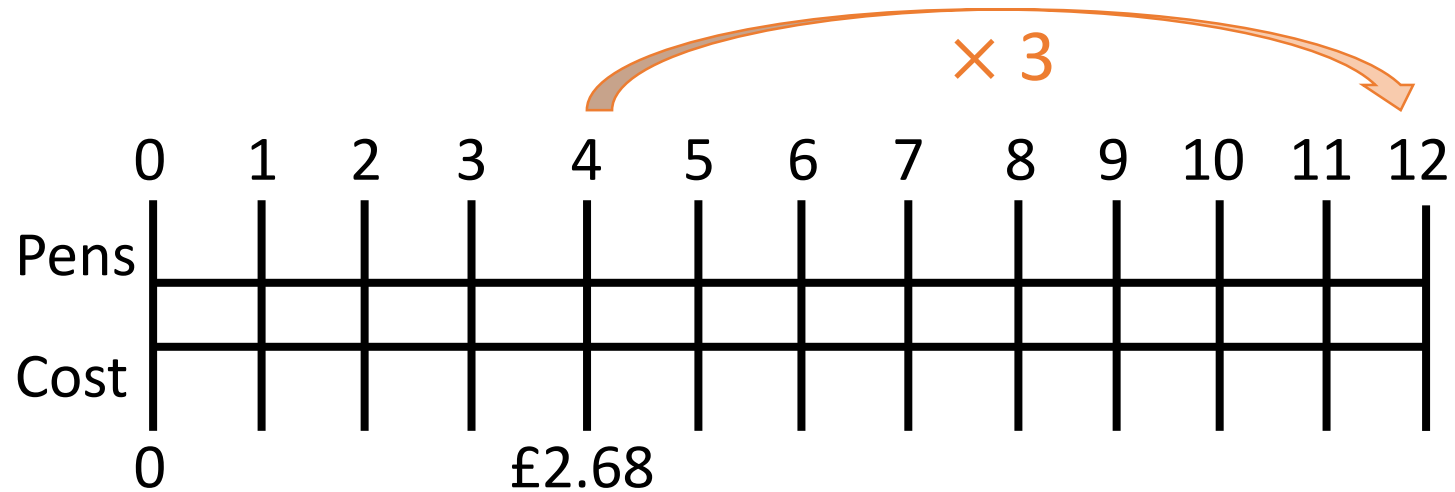
enlarged

proportion



4 pens cost £2.68

Use the double number line to work out the cost of 12 pens.

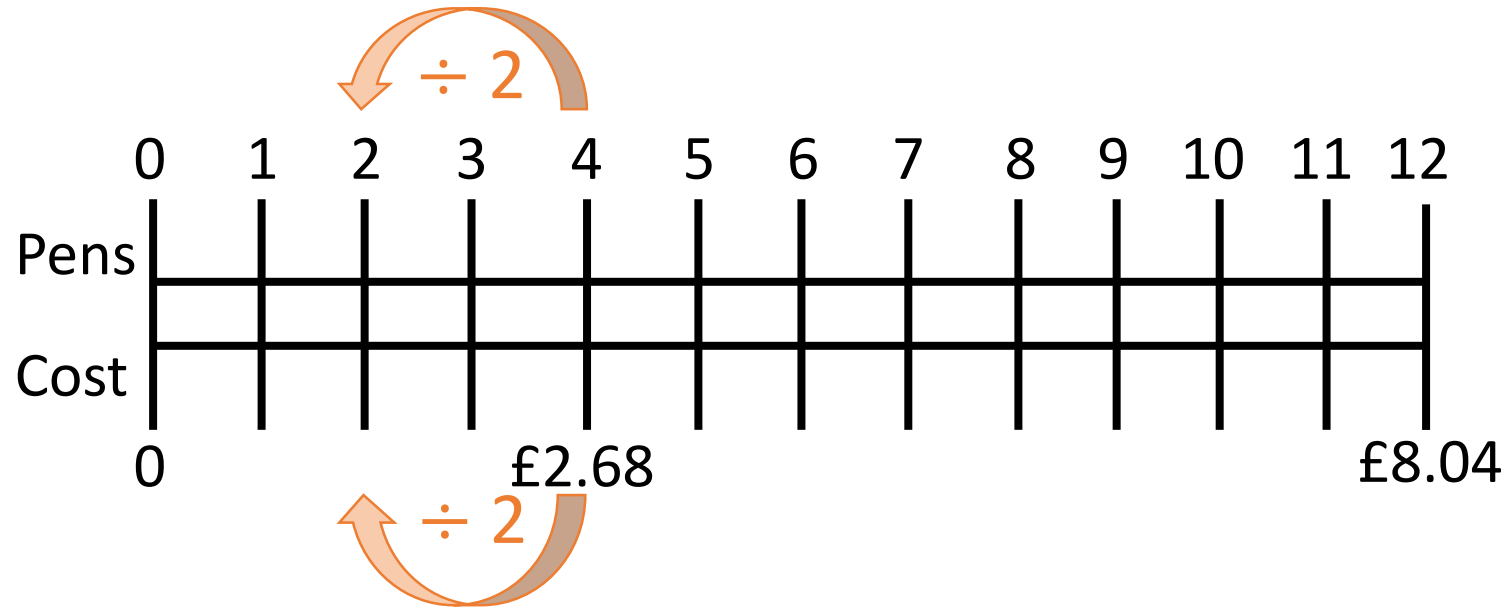


	2	6	8
×			3
	8	0	4
	2	2	

12 pens cost £8.04

4 pens cost £2.68

Use the double number line to work out the cost of 2 pens.



Half of £2.68 = £1.34

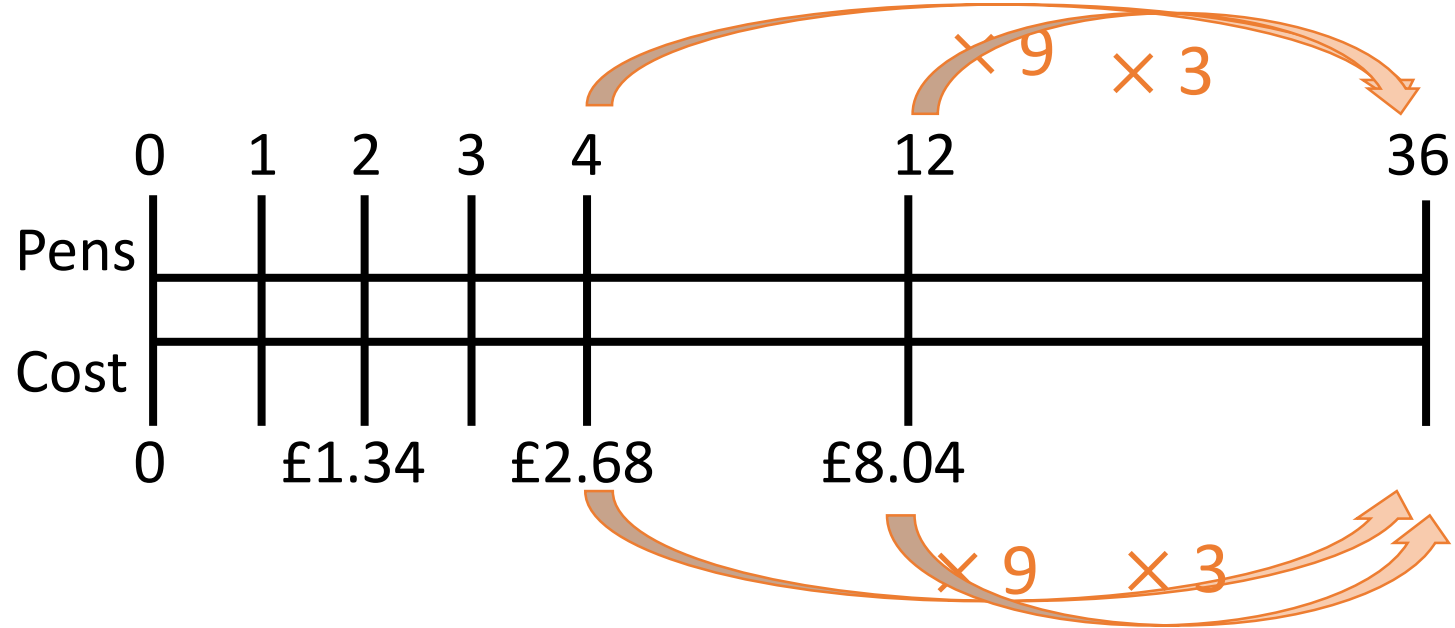
2 pens cost £1.34

Have a think



4 pens cost £2.68

Use the double number line to work out the cost of 36 pens.



$$£8.04 \times 3$$

$$£8 \times 3 = £24$$

$$4p \times 3 = 12p$$

36 pens cost £24.12

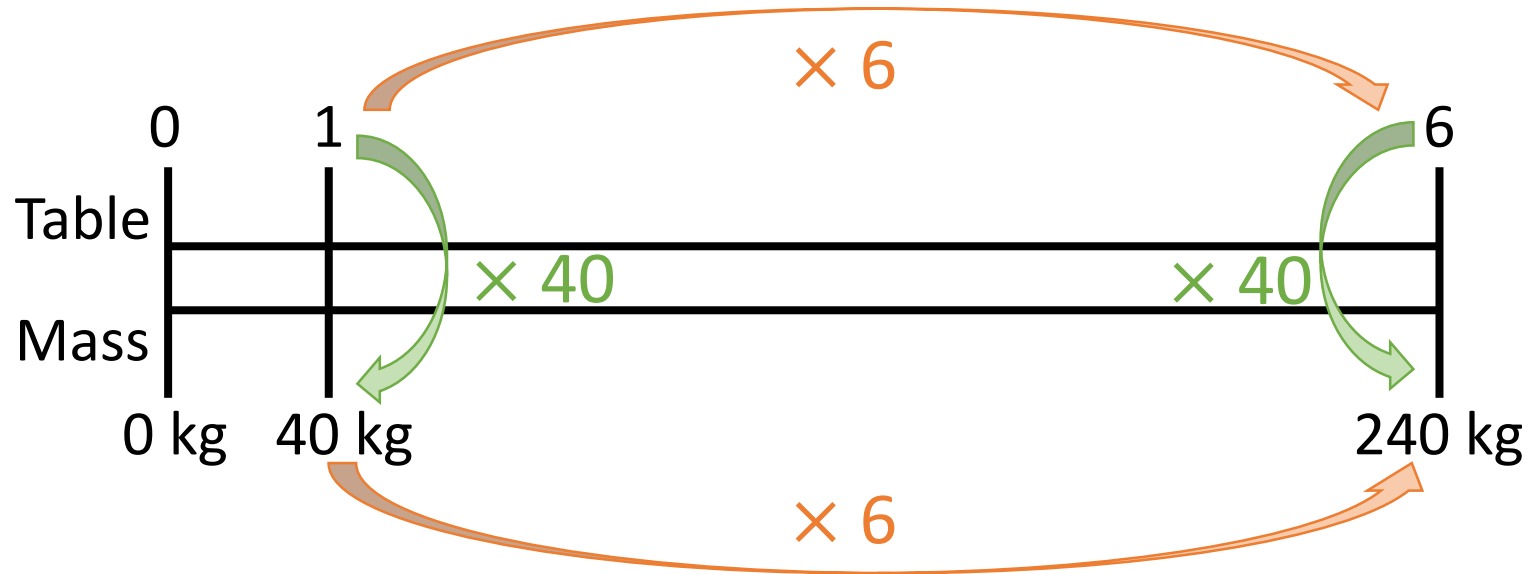
Have a think





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Show on the double number line that
one table has a mass of 40 kg.

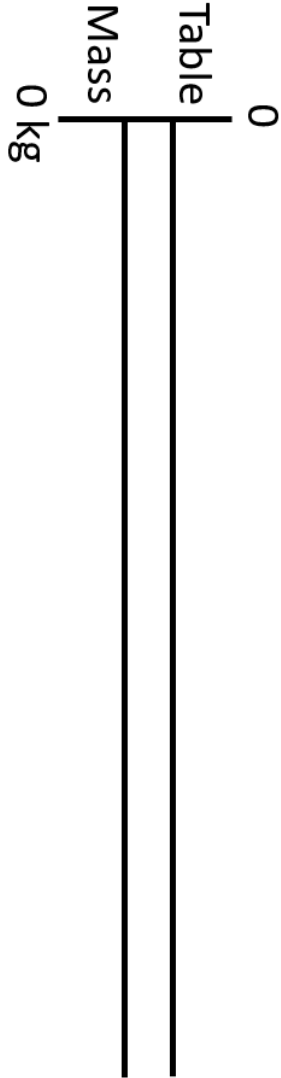


What is the mass of 6 tables?

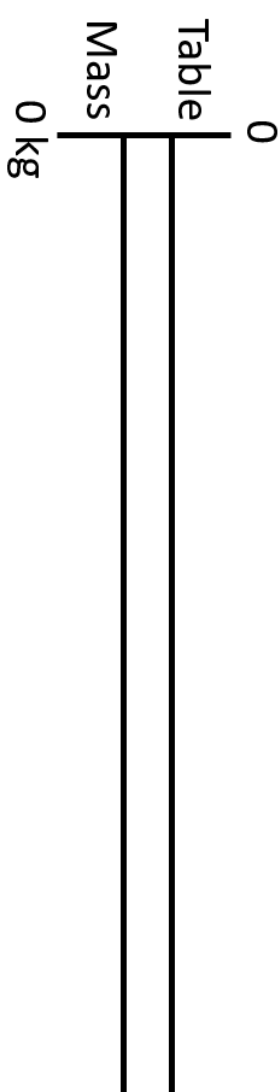
Have a think



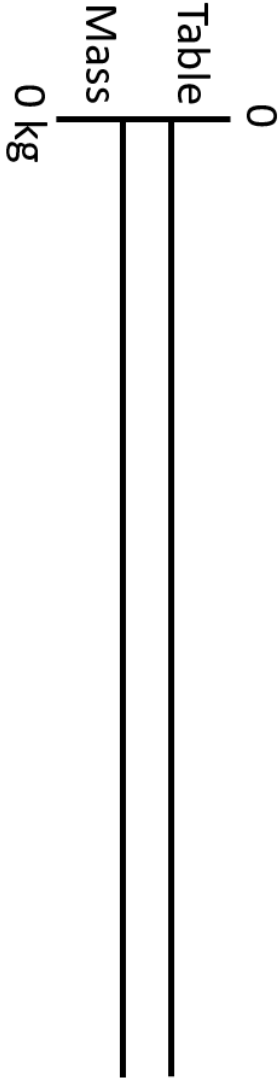
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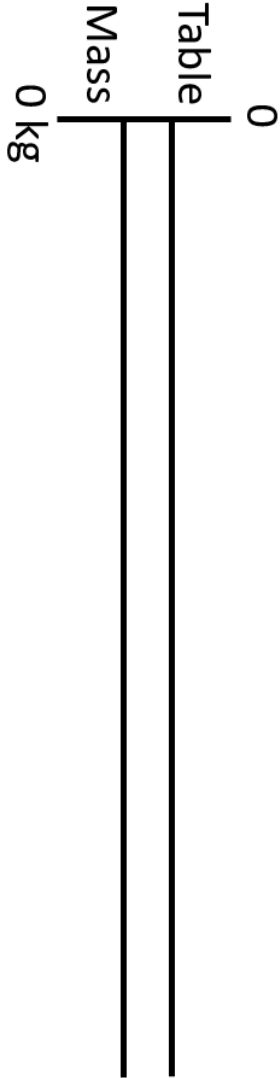
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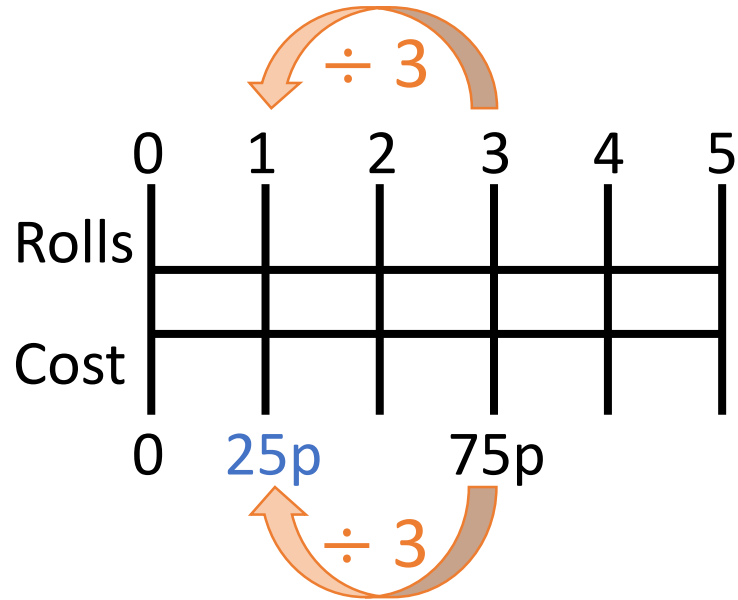
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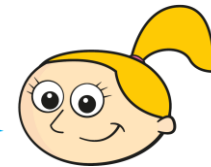
shutterstock.com - 152925652

Eva buys 3 bread rolls for 75p



What is the cost of 5 bread rolls? £1.25

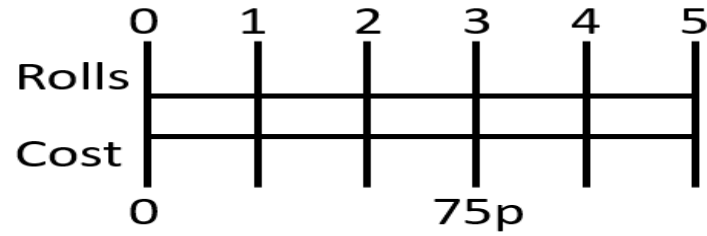
I can work out the cost of 1 bread roll first by dividing by 3!



If 1 bread roll costs 25p, then 5 bread rolls cost $5 \times 25p$

Eva buys 3 bread rolls for 75p

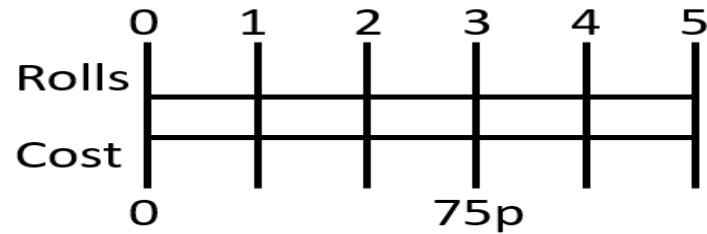
Tues



What is the cost of 5 bread rolls?



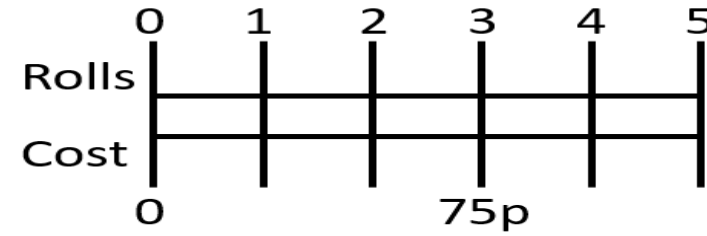
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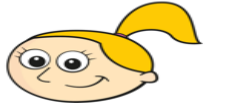
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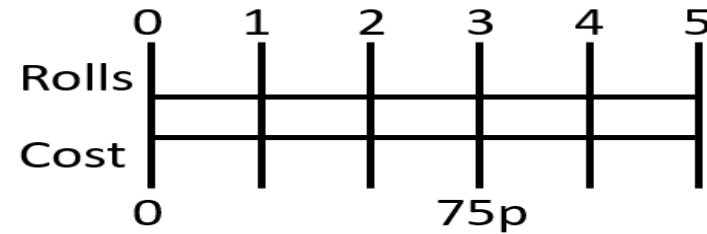
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Eva buys 3 bread rolls for 75p

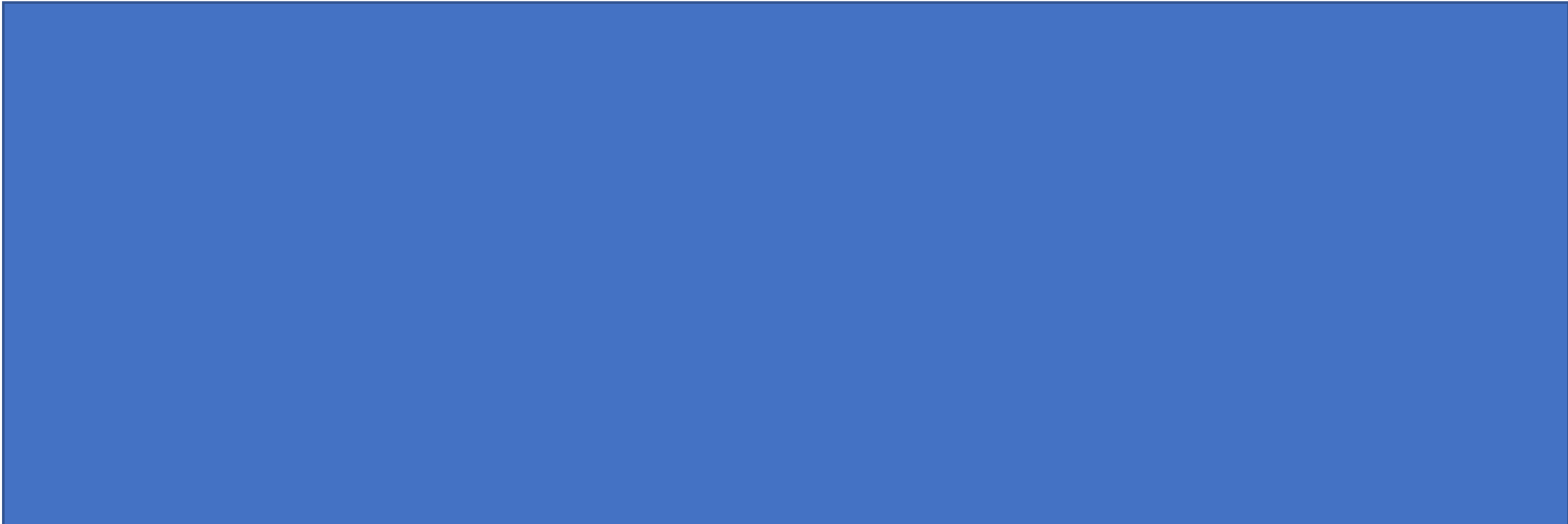


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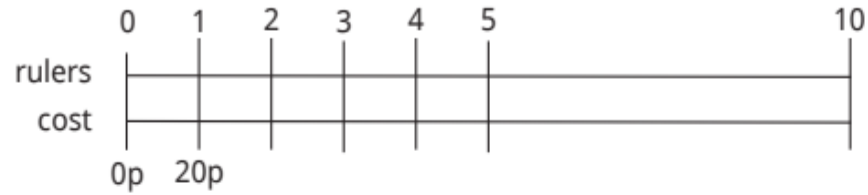




Your turn



- 1 One ruler costs 20p.



- a) Complete the double number line.
- b) How much do three rulers cost?
- c) How much do 10 rulers cost?

Give your answer in pounds.

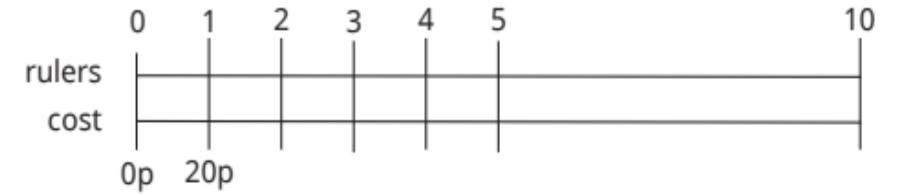
What else can you work out?

- 2 a) Show on the double number line that one marble has a mass of 25 g.



- b) What is the mass of five marbles?

- 1 One ruler costs 20p.



- a) Complete the double number line.
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What else can you work out?

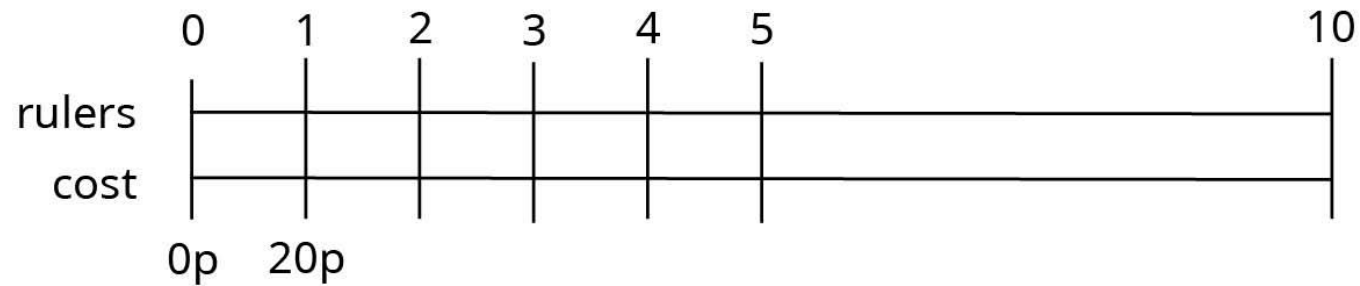
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Proportion problems

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b) How much do three rulers cost?

 p

c) How much do 10 rulers cost?

Give your answer in pounds.

£

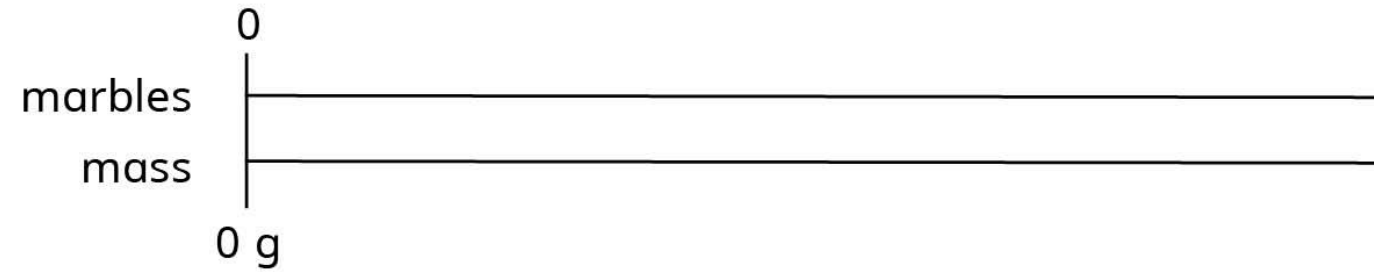
What else can you work out?





2

- a)** Show on the double number line that one marble has a mass of 25 g.

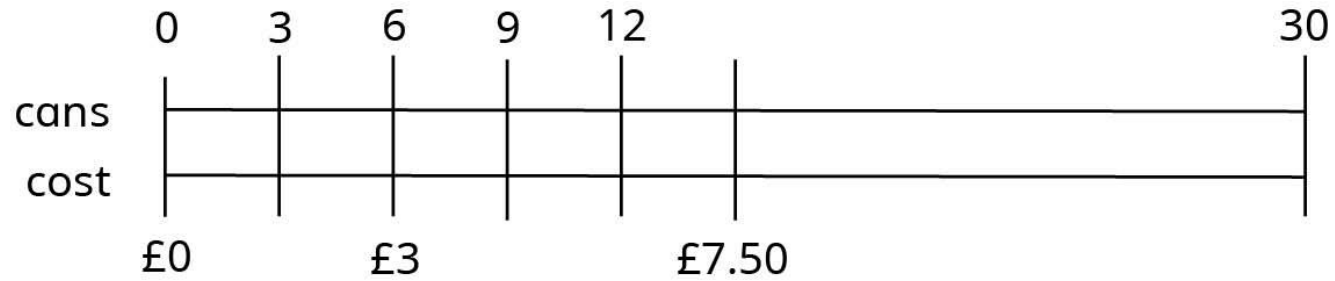


- b)** What is the mass of five marbles?

 g



3 Six cans of lemonade cost £3



- a)** Complete the double number line.
- b)** How much do 12 cans of lemonade cost?
- c)** How much do 30 cans of lemonade cost?
- d)** How many cans can be bought with £7.50?

£

£

Guided



- 3** Six cans of lemonade cost £3



- a) Complete the double number line.
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- 4** Seven pencils cost £3.64

- a) How much do four pencils cost?

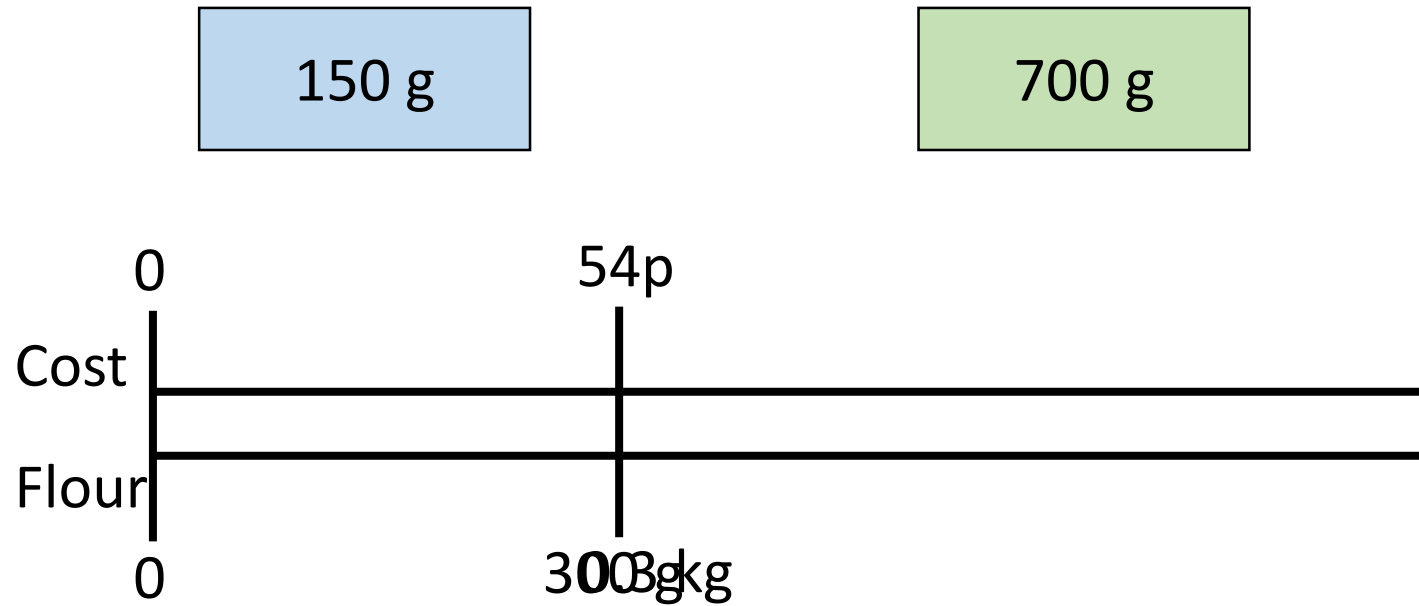
Use the double number line to help you.





A shop sells flour at the price of 54p for 0.3 kg.

How much would it cost to buy these masses of flour?



Have a think 

A shop sells flour at the price of 54p for 0.3 kg.

How much would it cost to buy these masses of flour?

150 g

700 g

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Tues

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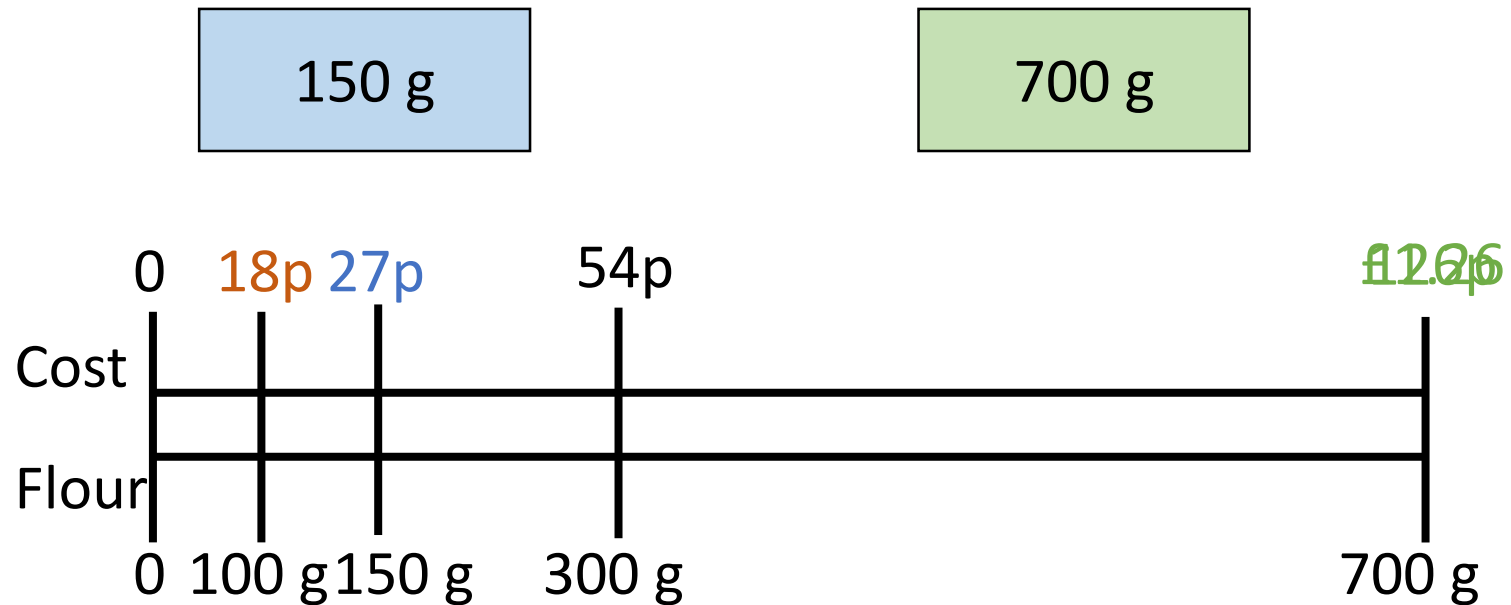
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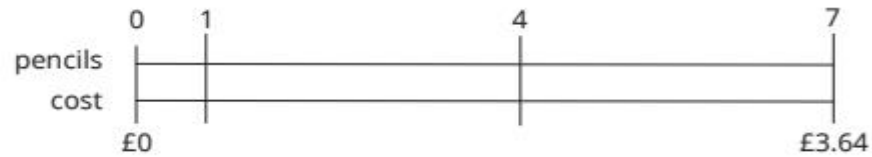
How much would it cost to buy these masses of flour?



4 Seven pencils cost £3.64

a) How much do four pencils cost?

Use the double number line to help you.



b) How much do eight pencils cost?

Use the double number line to help you.

5 A machine can make 120 nails in 4 seconds.

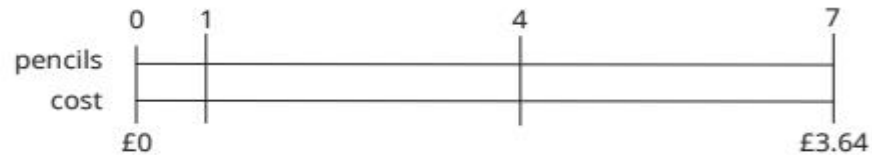
a) How many nails does the machine make in 20 seconds?

b) How many nails does the machine make in one minute?

4 Seven pencils cost £3.64

a) How much do four pencils cost?

Use the double number line to help you.



b) How much do eight pencils cost?

Use the double number line to help you.

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Tues Hex/
Oct

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a) How many nails does the machine make in 20 seconds?

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7 A car is travelling at a constant speed.
It travels 10 miles in 15 minutes.
How far will the car travel in one hour?

8 4 litres of petrol cost £7.40
How much do 7 litres of petrol cost?
How did you work out your answer?
Talk about it with a partner.

7 A car is travelling at a constant speed.
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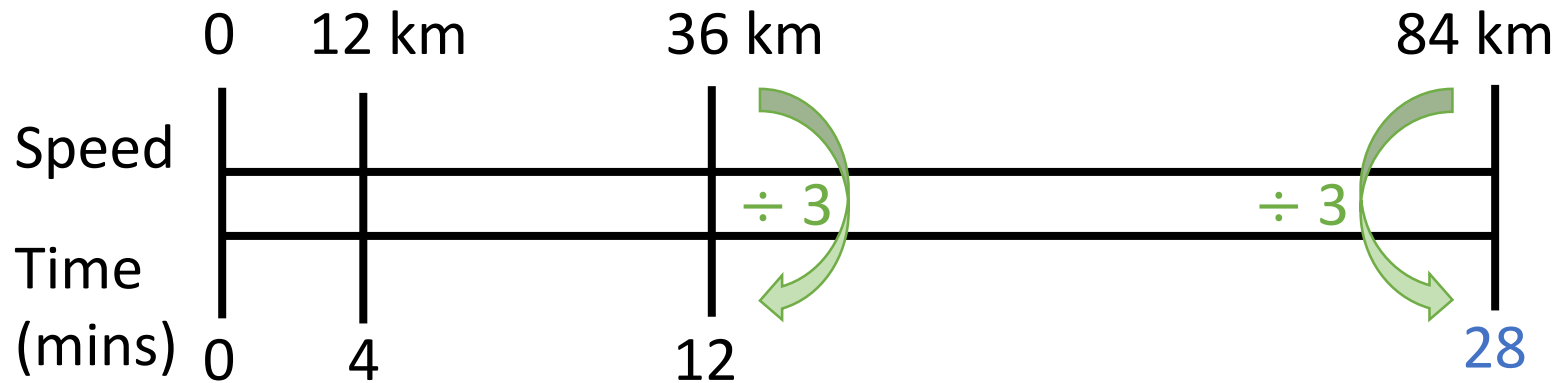
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How much do 7 litres of petrol cost?
How did you work out your answer?
Talk about it with a partner.

A car travelling at a constant speed travels 36 km in 12 minutes.

How long will it take the car to travel 84 km?

28 minutes

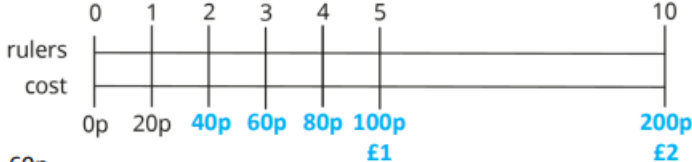
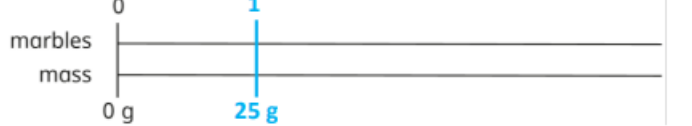


$$36 \div 3 = 12$$
$$12 \div 3 = 4$$

$$12 \times \underline{7} = 84$$

Have a think

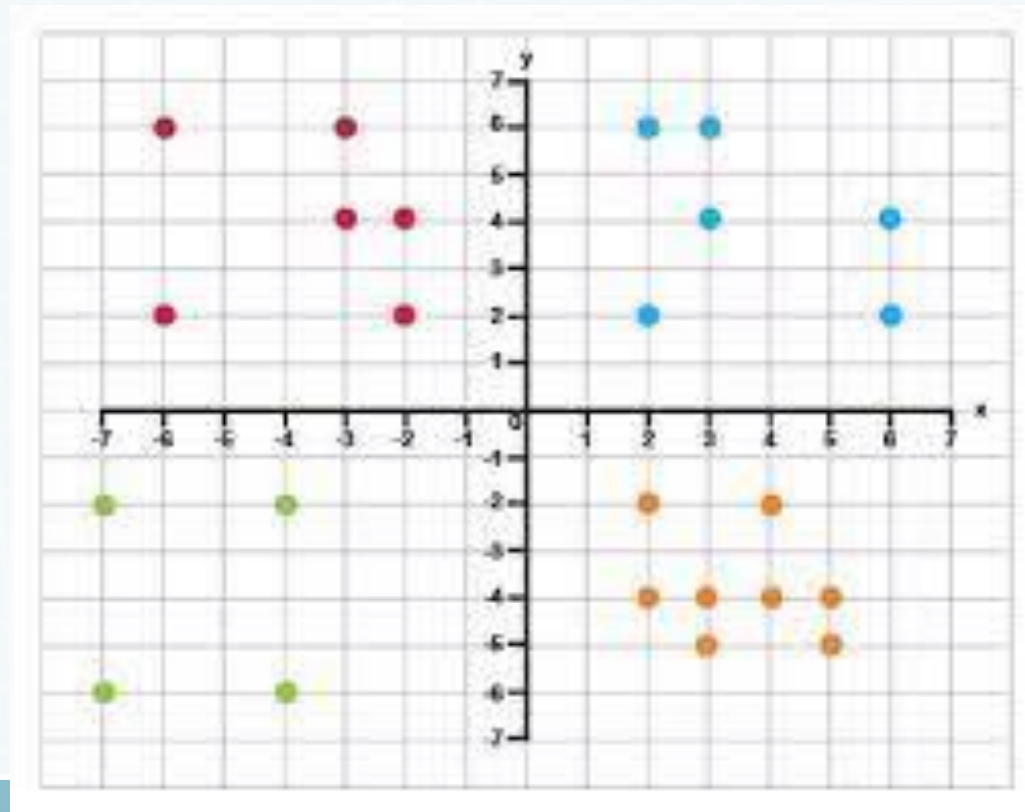


Question	Answer
1	a)  b) 60p c) £2 child's questions
2	a)  b) 125 g
3	a)  b) £6 c) £15 d) 15
4	a) £2.08 b) £4.16
5	a) 600 b) 1,800
6	a) 450 b) 500 c) 30

6	a) 450 b) 500 c) 30
7	40 miles
8	£12.95
9	£8

Maths meeting- Tues

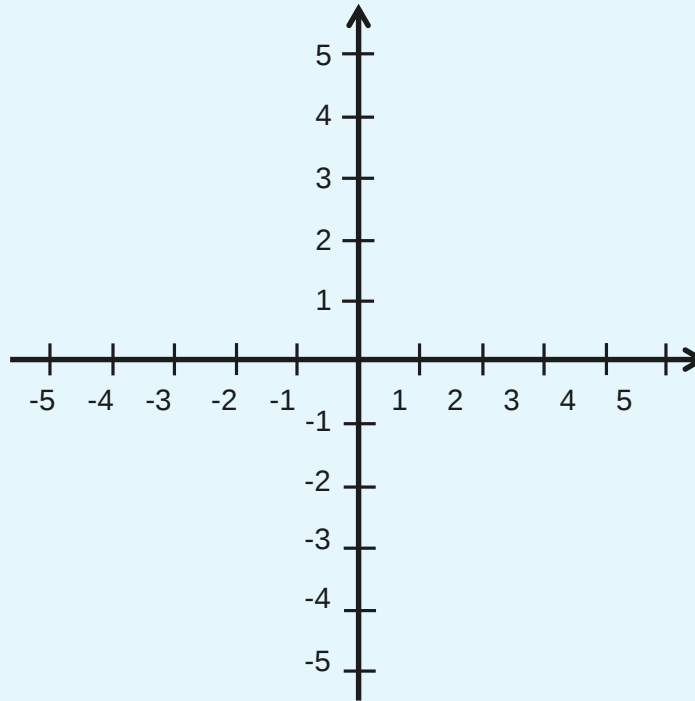
Coordinates



The Coordinates Grid

Draw the axes for a coordinates grid and number the axes from -5 to 5.

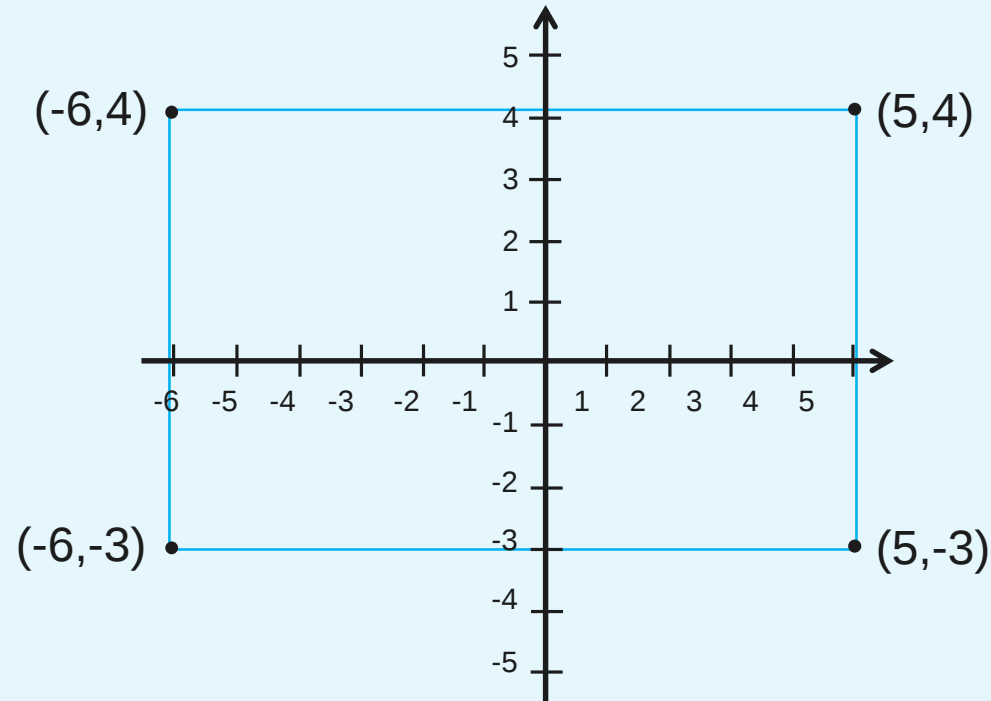
[Click for answer](#)



Draw a rectangle within the grid and label each of the coordinates.
Share your rectangle with a partner.

Rectangle

These coordinates are at the corners of a rectangle.
The rectangle is parallel to the axes of the grid.

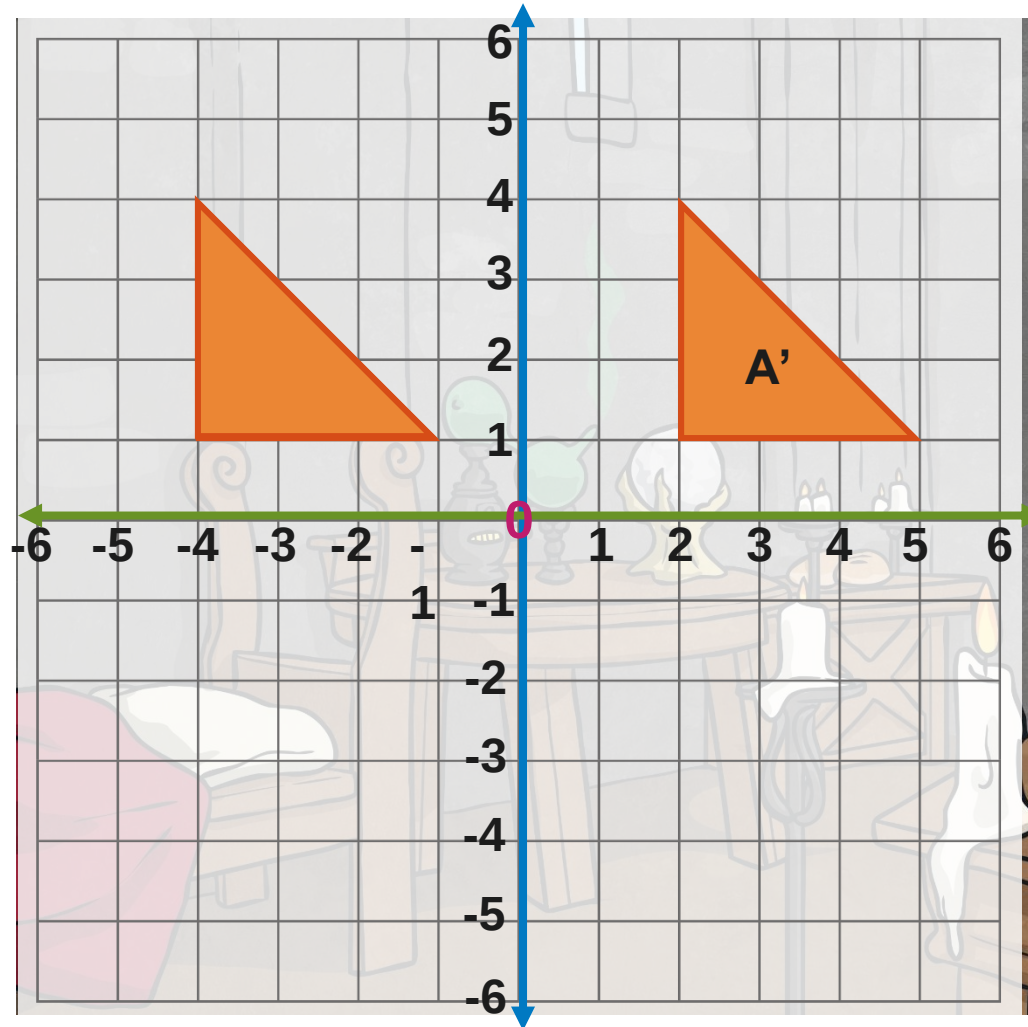


What are the other coordinates of the rectangles?

[Click for answer](#)

On unmarked grids, design some of your own similar problems for a partner.

Translation Quiz

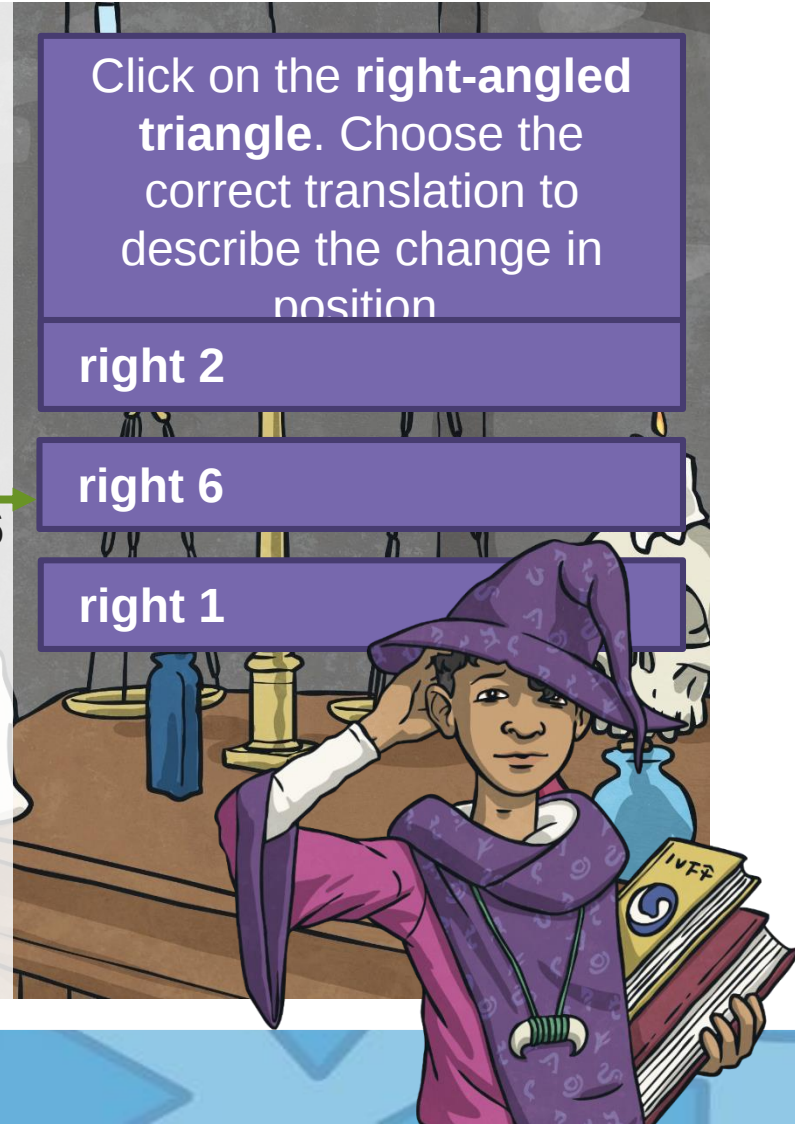


Click on the **right-angled triangle**. Choose the correct translation to describe the change in position

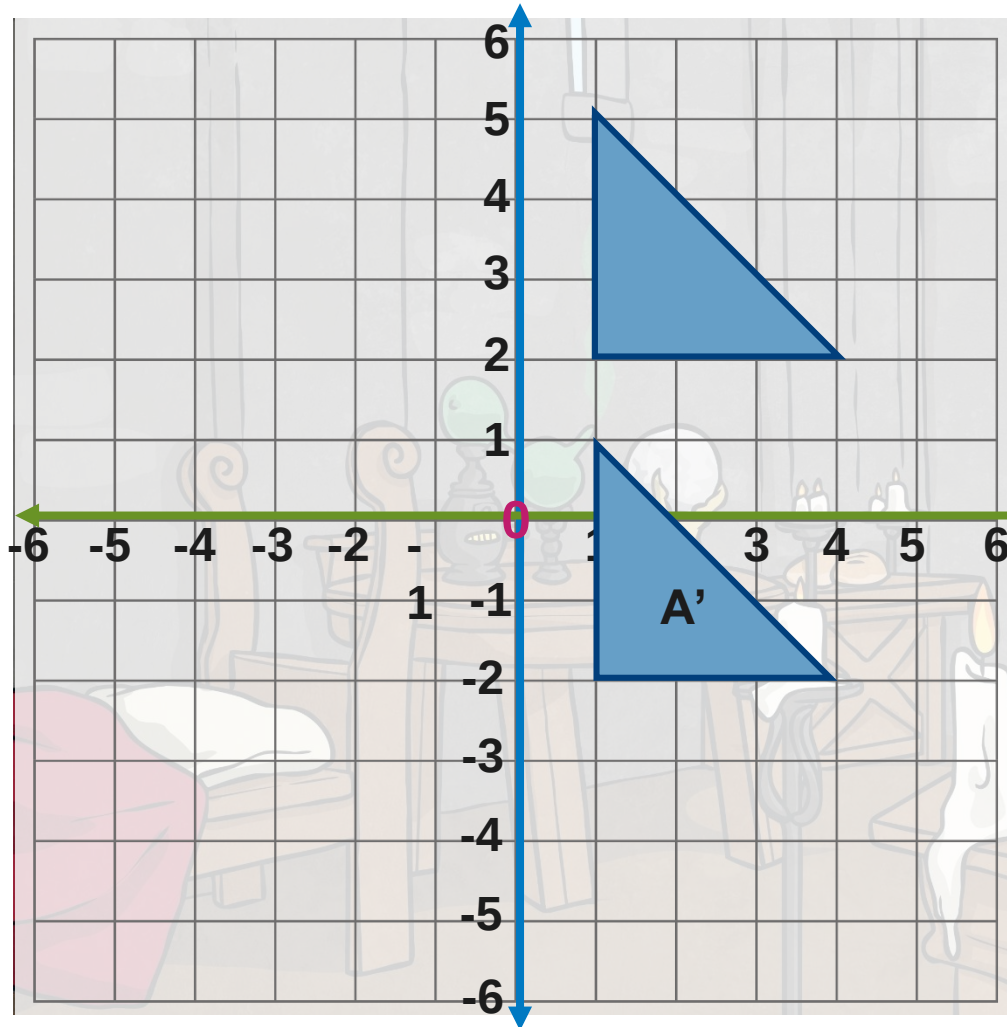
right 2

right 6

right 1



Translation Quiz

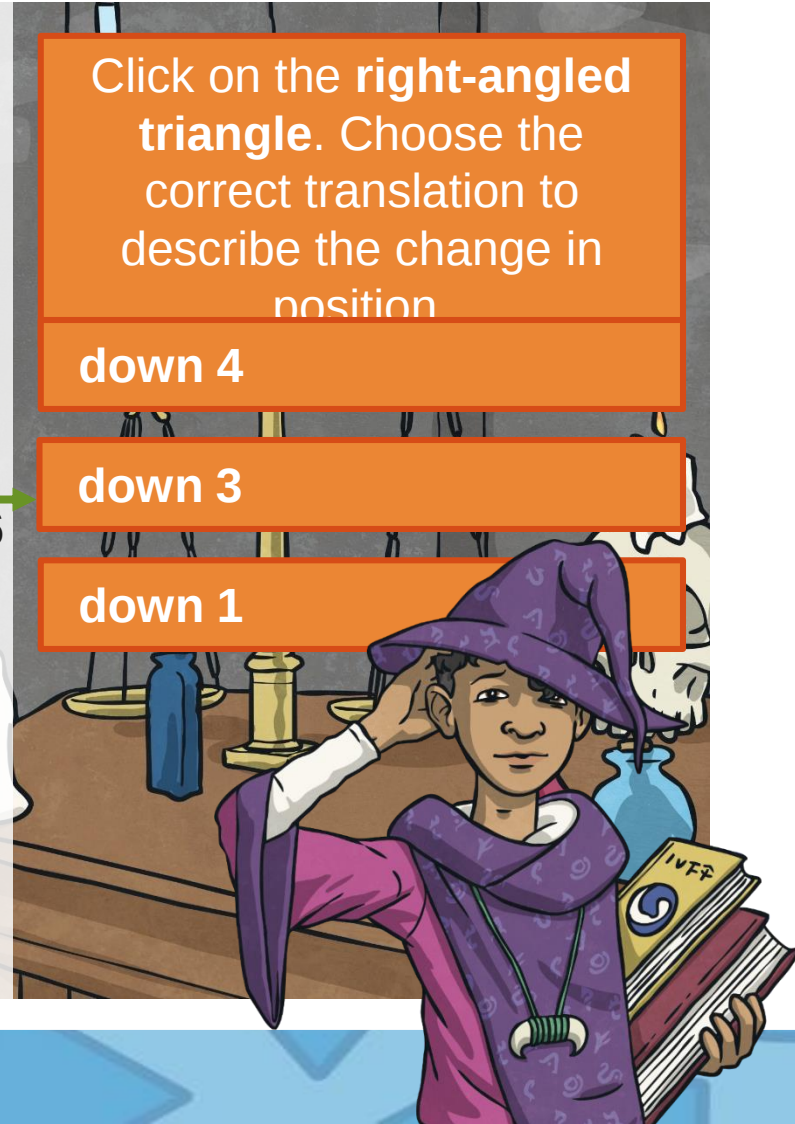


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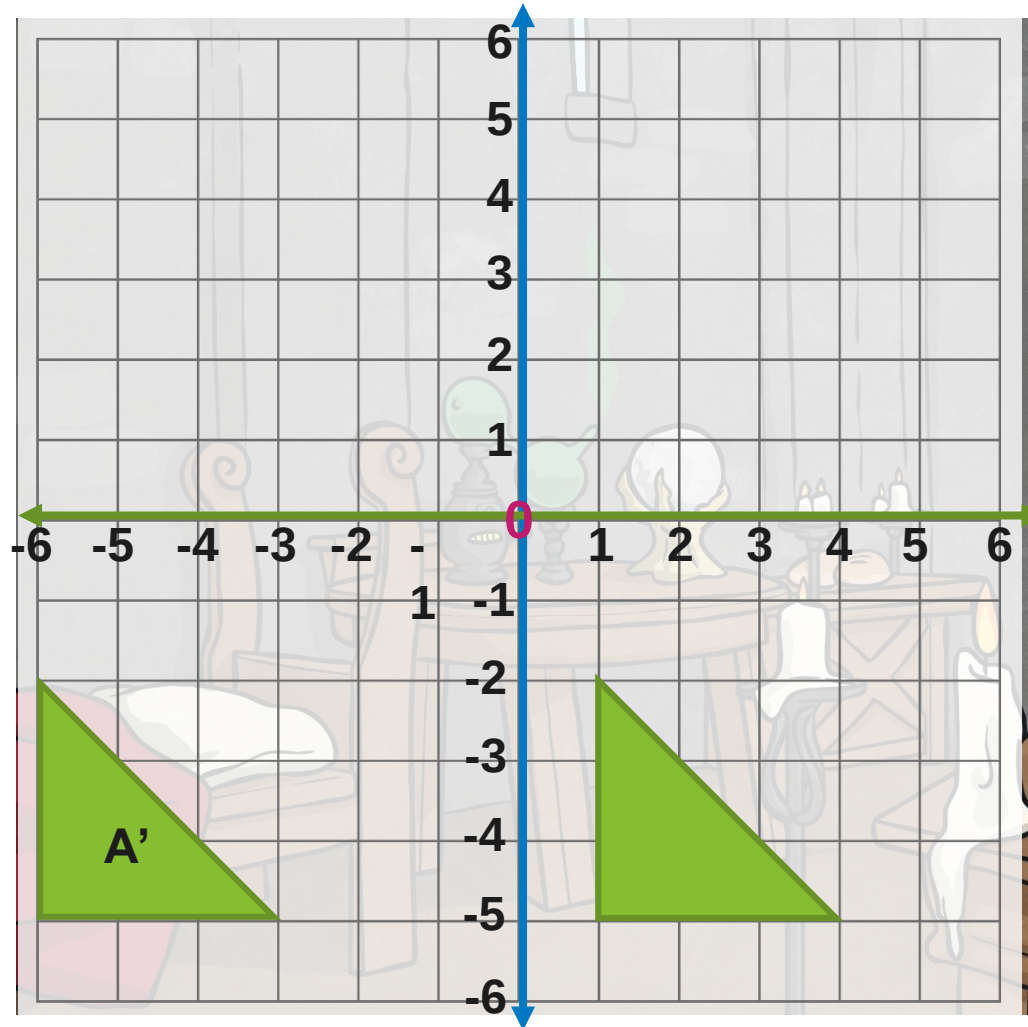
down 4

down 3

down 1



Translation Quiz

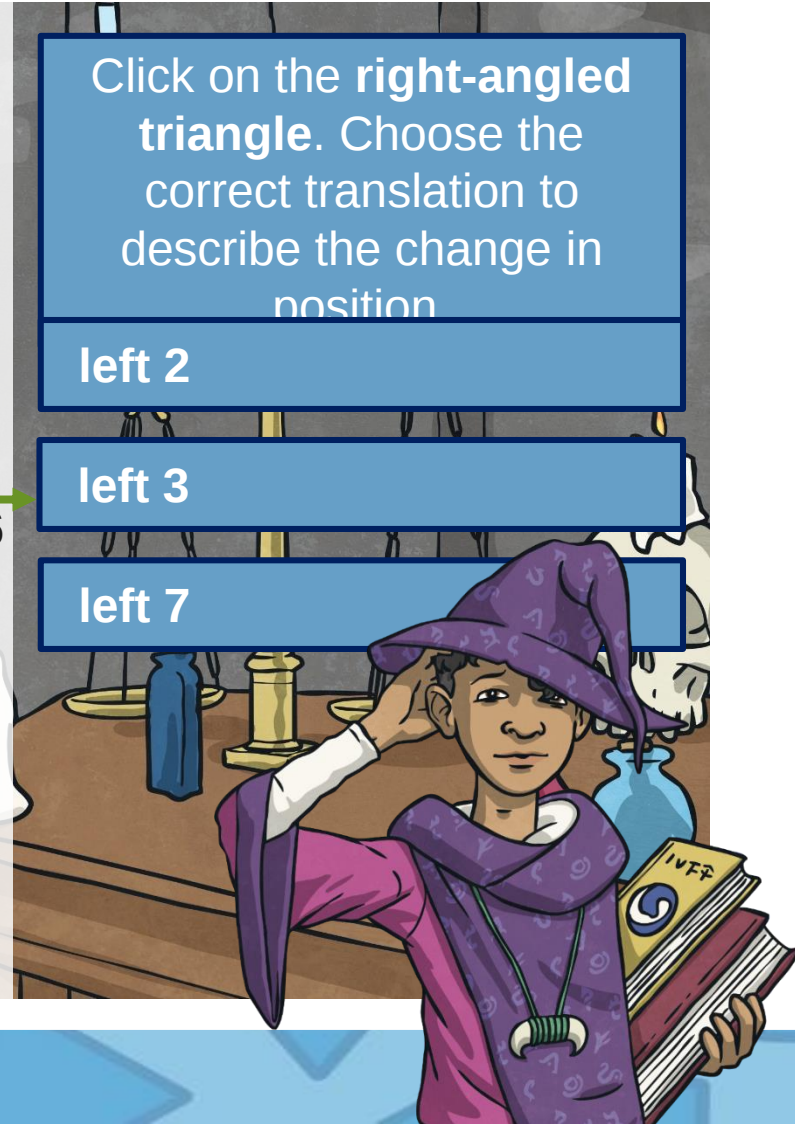


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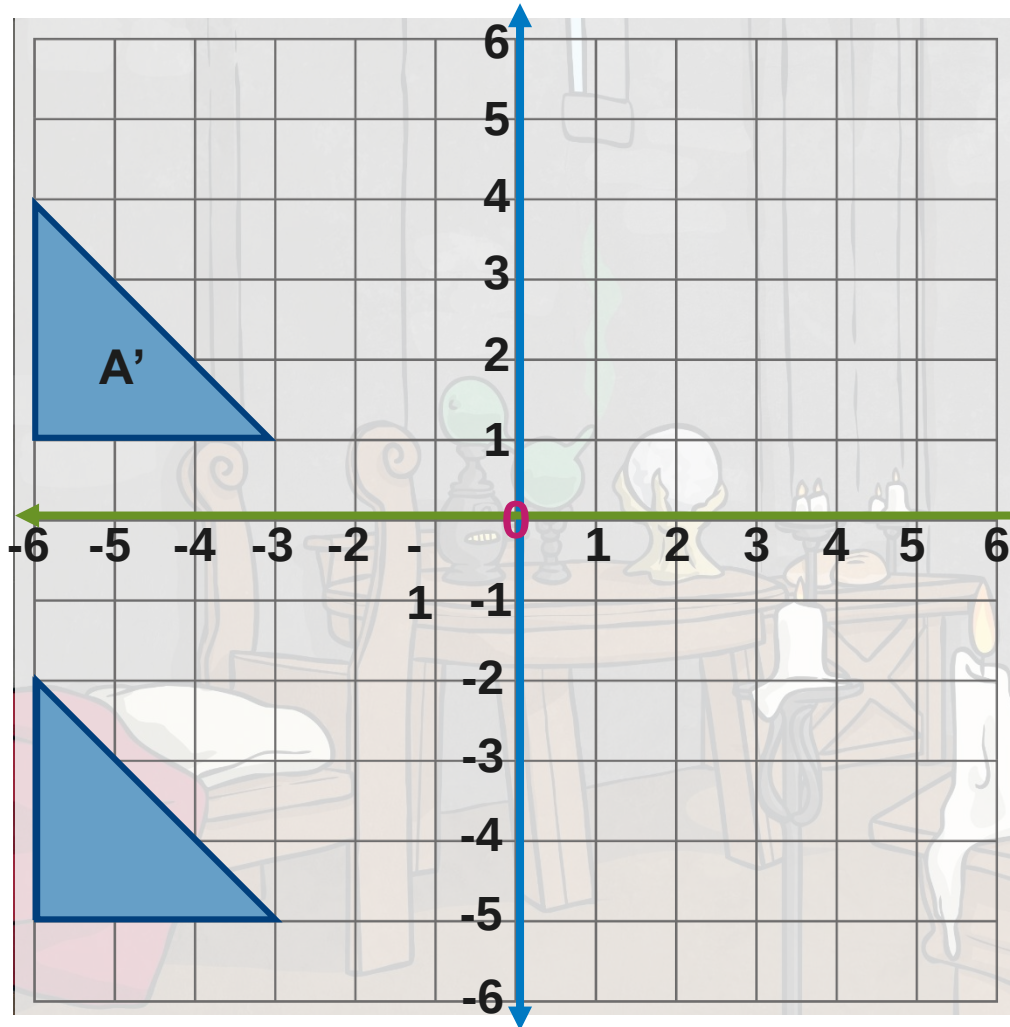
left 2

left 3

left 7



Translation Quiz

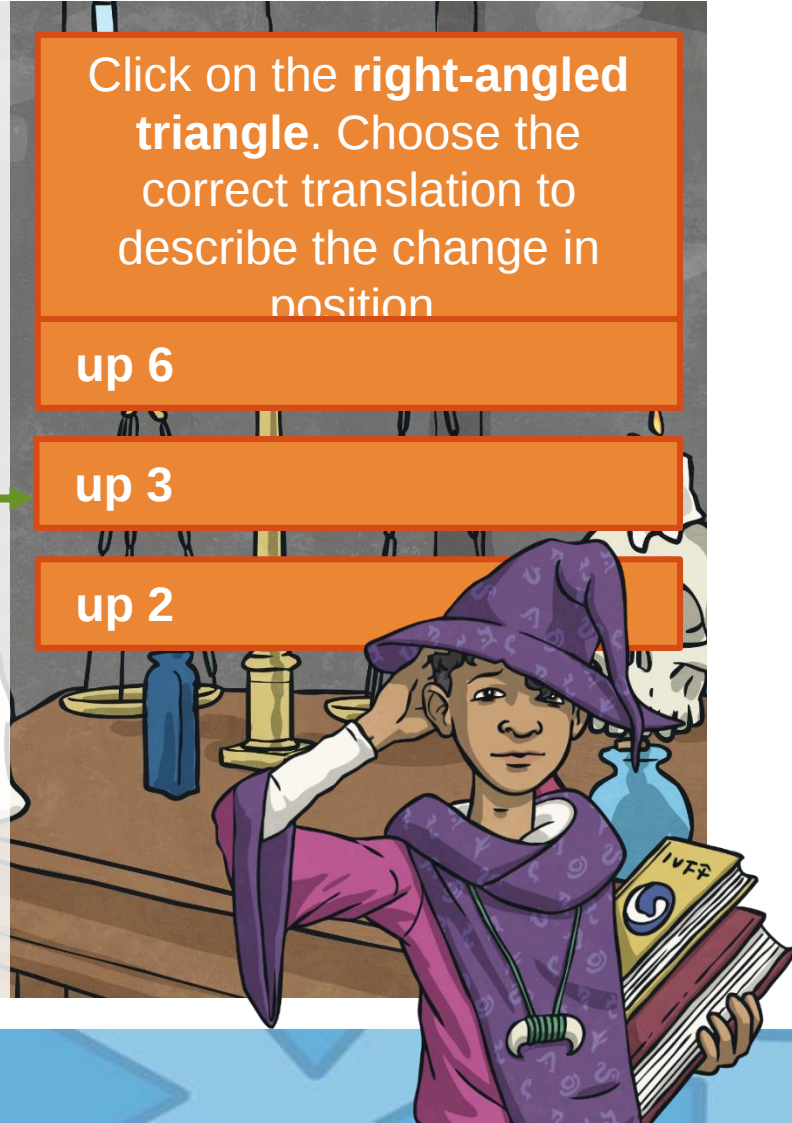


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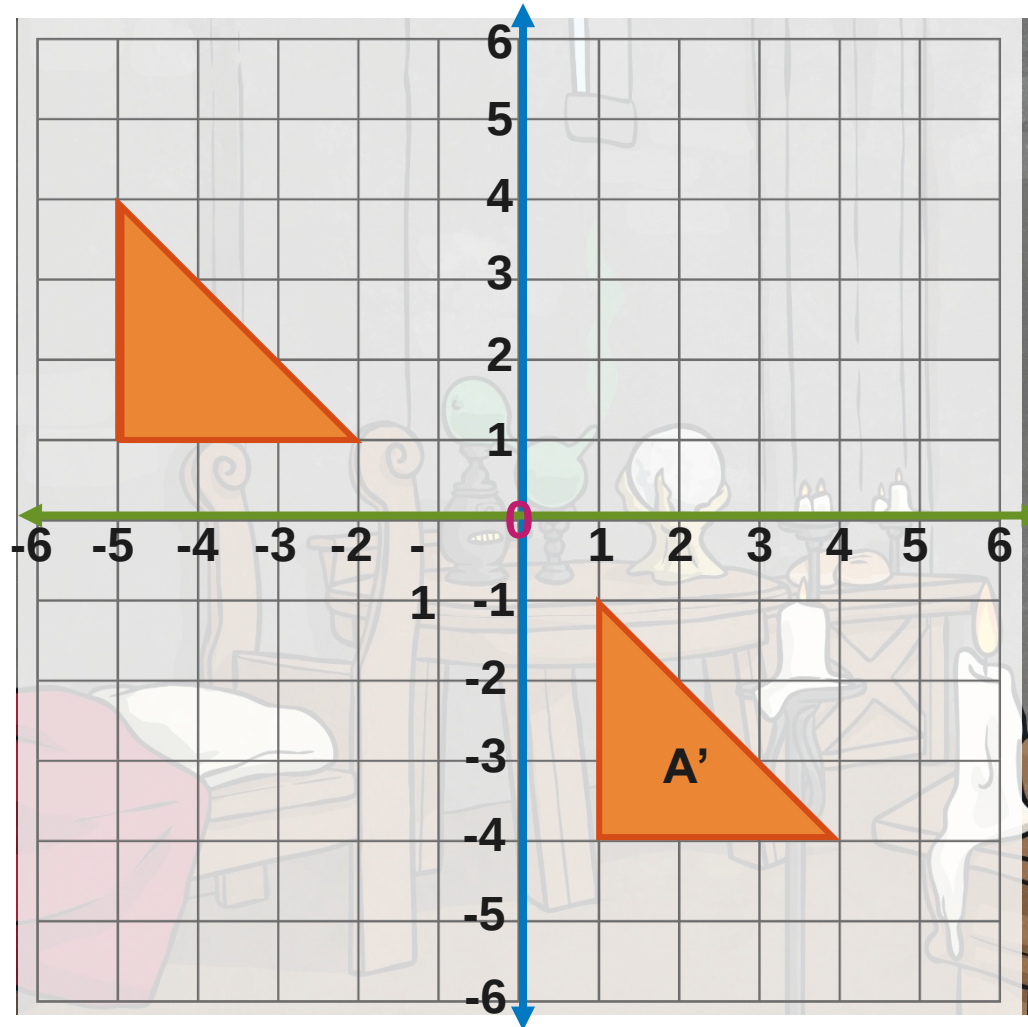
up 6

up 3

up 2



Translation Quiz



Click on the **right-angled triangle**. Choose the correct translation to describe the change in position

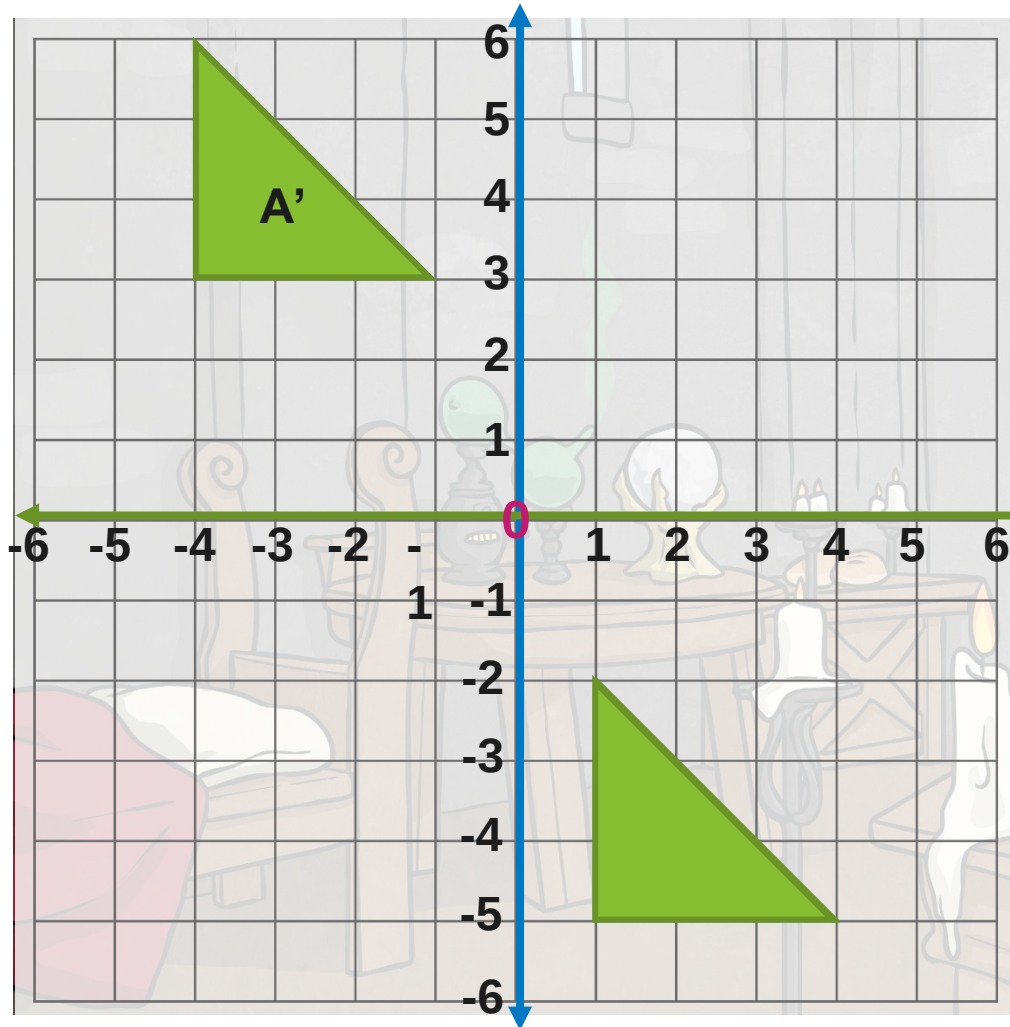
right 5
down 6

right 6
down 5

right 6
down 6



Translation Quiz



Click on the **right-angled triangle**. Choose the correct translation to describe the change in position

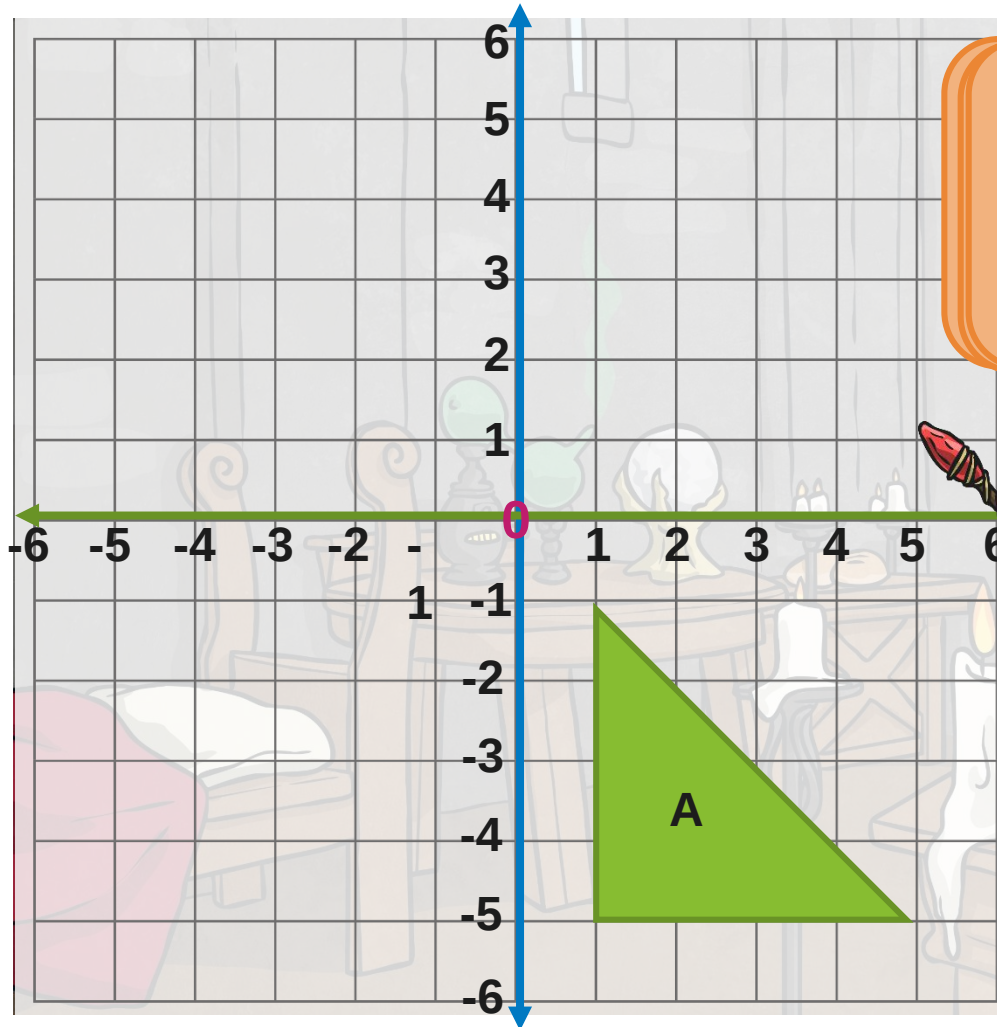
left 5
up 9

left 8
up 5

left 5
up 8



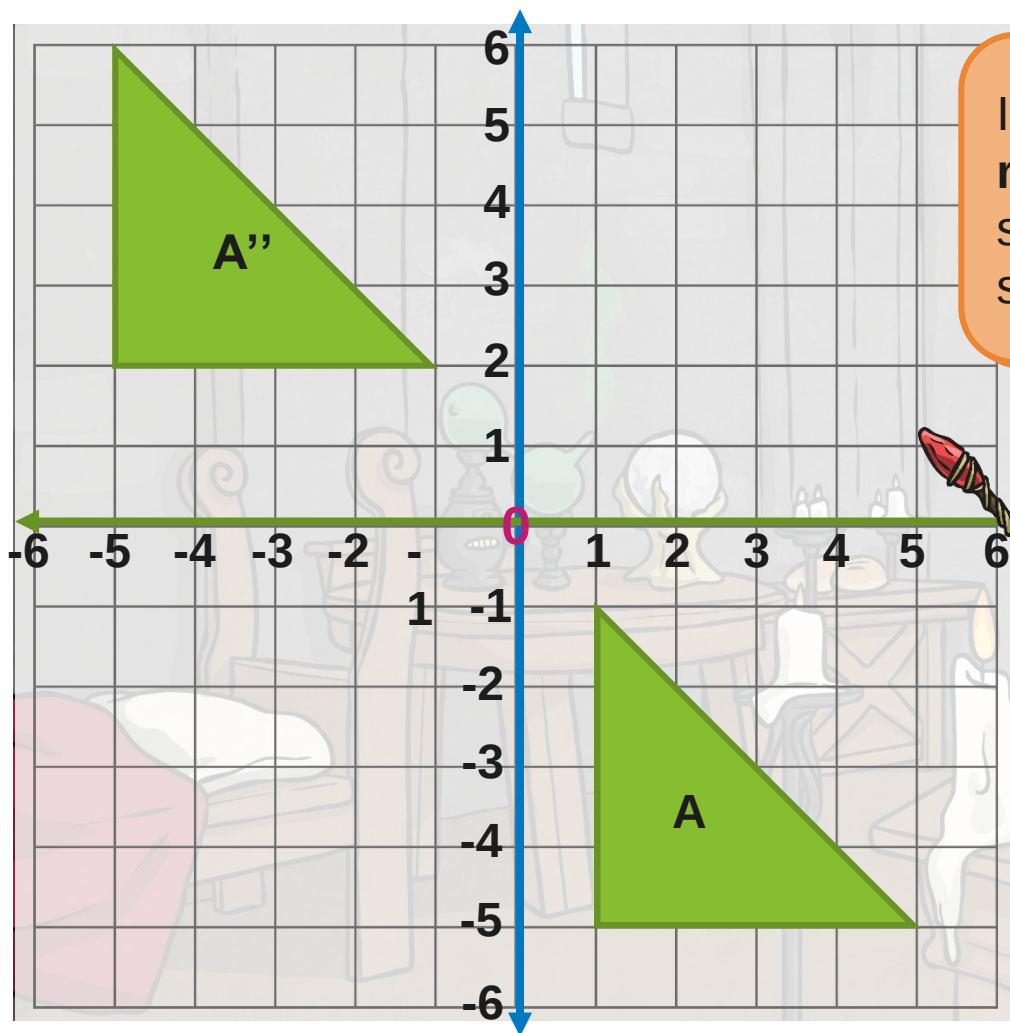
Four-Quadrant Translation



Click on the **right-angled triangle** to translate it **left 6, up 7** on the four-quadrant coordinate grid.



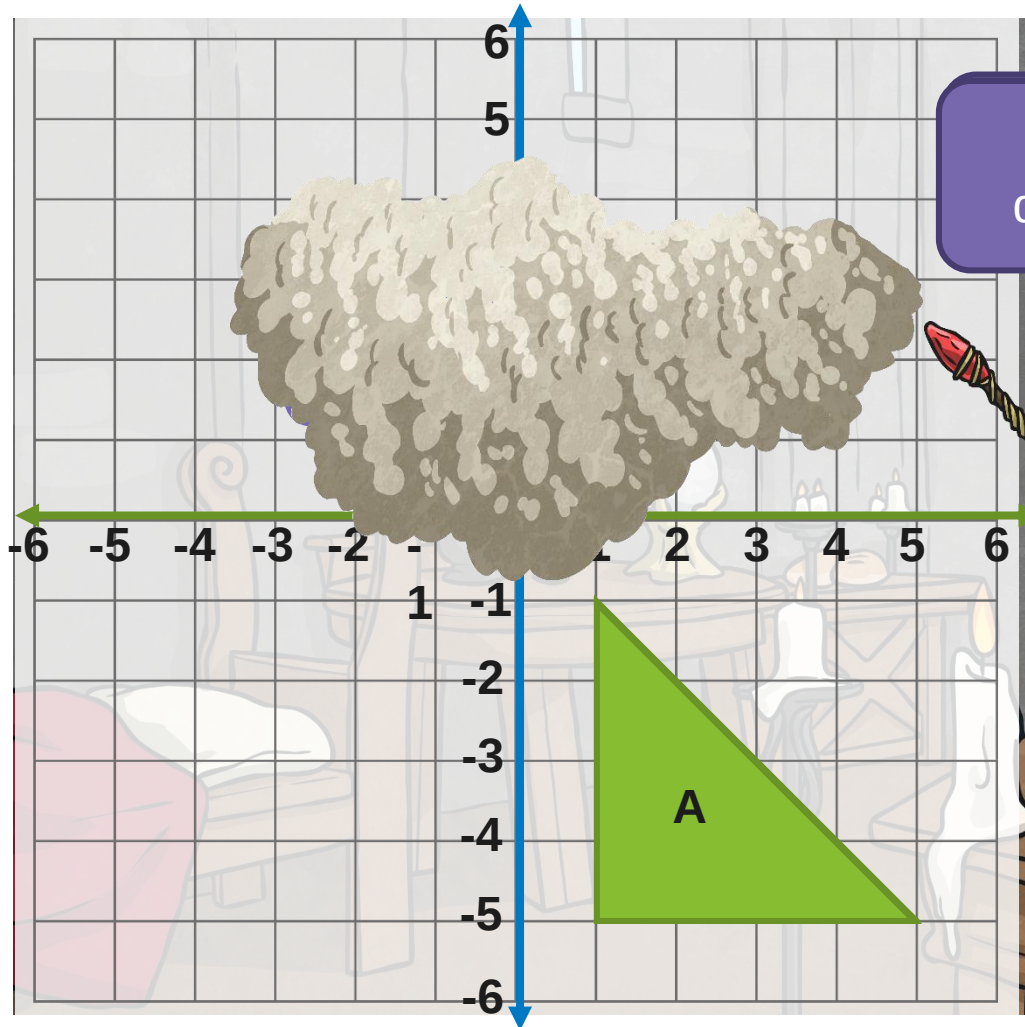
Four-Quadrant Translation



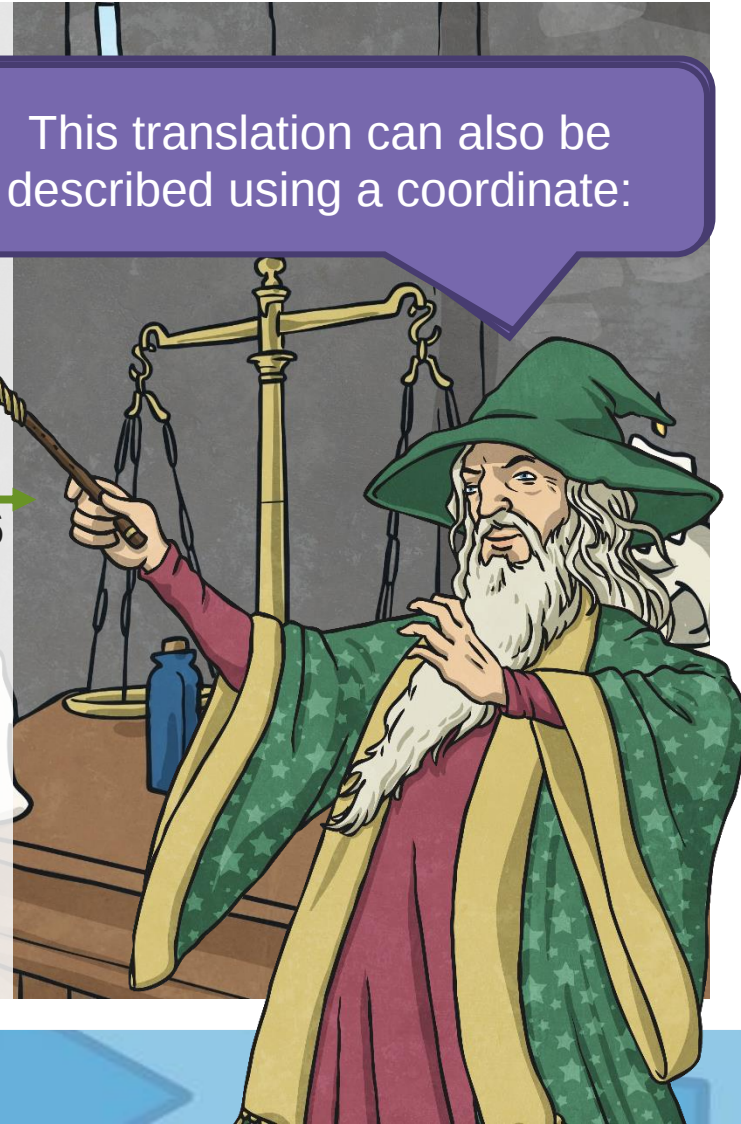
If shape **A'** is then translated **right 7, down 2**, the translated shape would be labelled **A''**, to show it is the second translation.



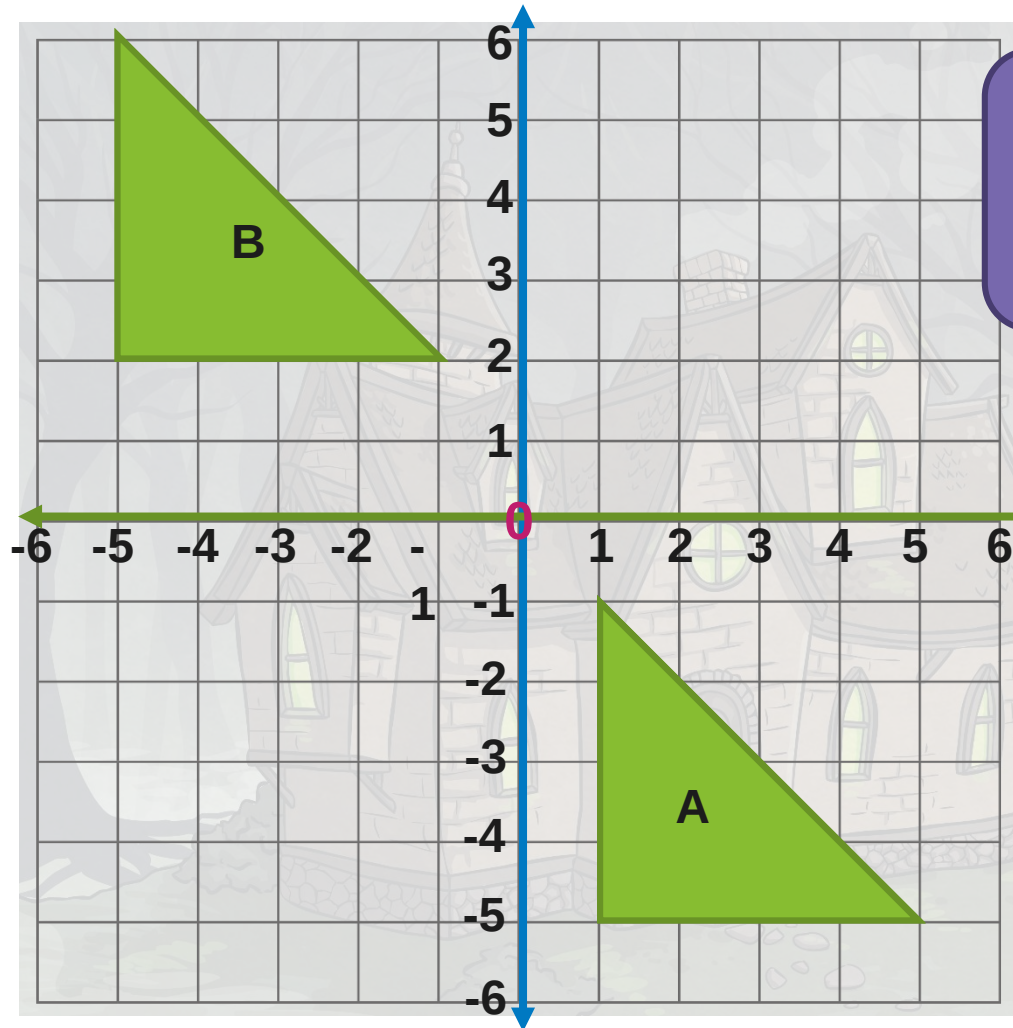
Four-Quadrant Translation



This translation can also be described using a coordinate:

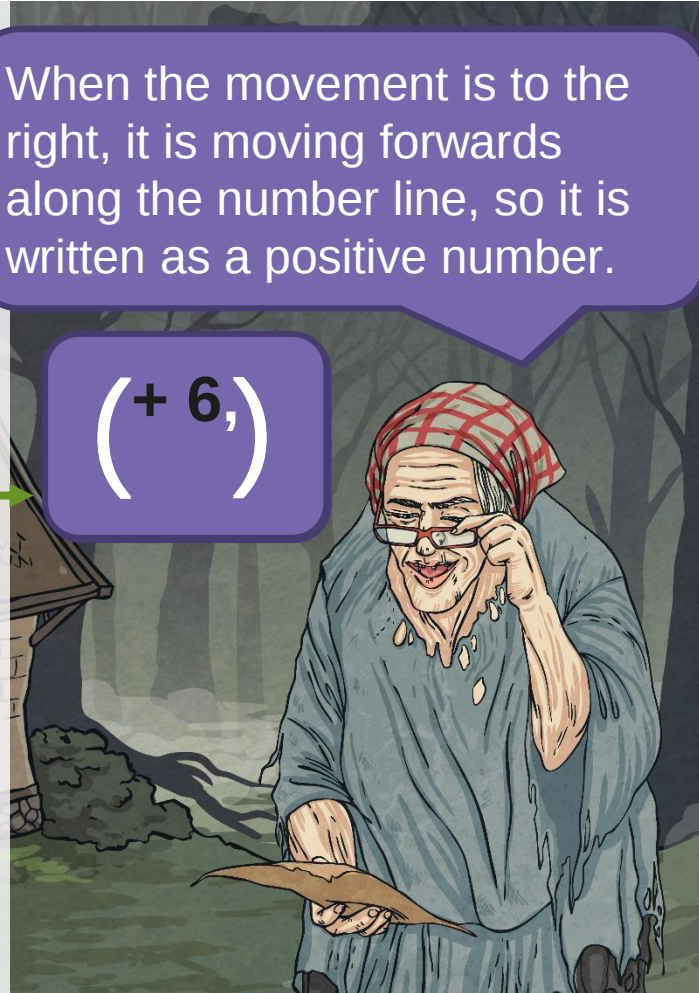


Four-Quadrant Translation

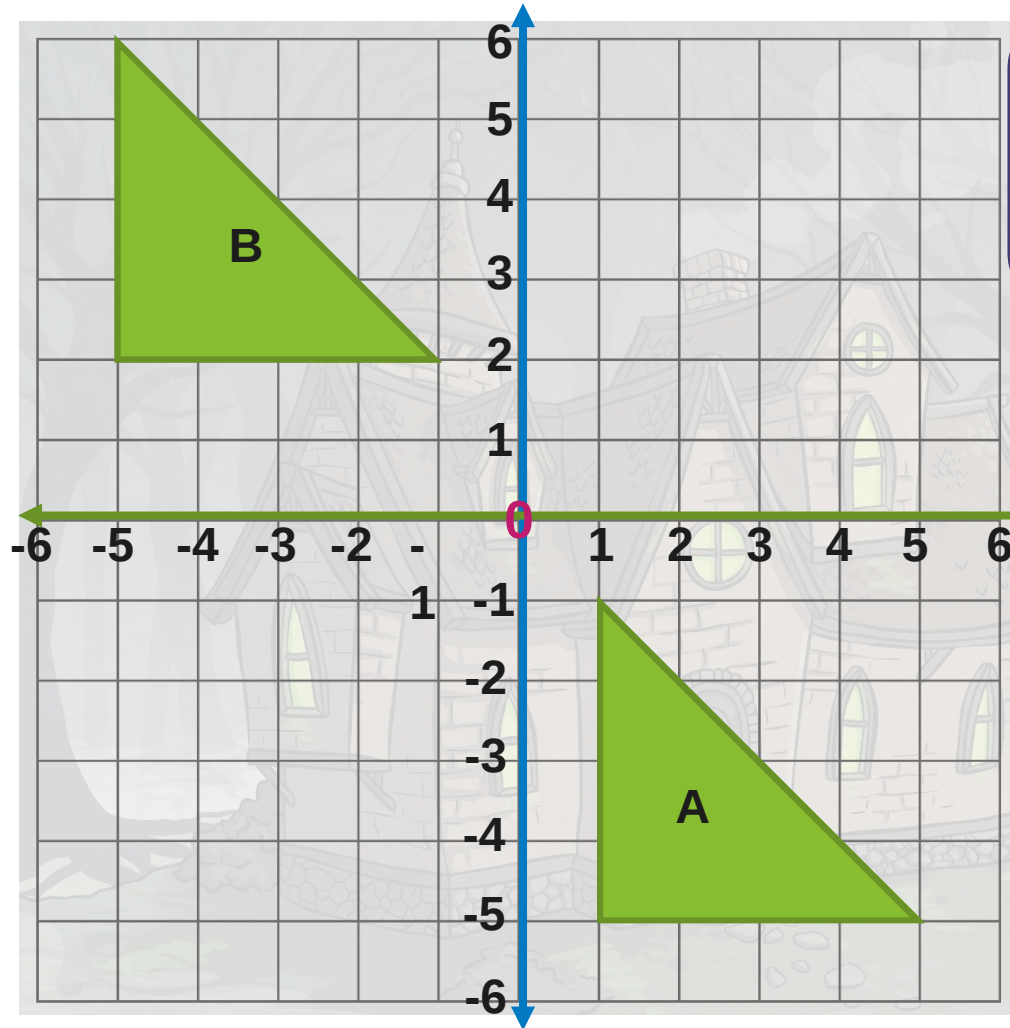


When the movement is to the right, it is moving forwards along the number line, so it is written as a positive number.

(+ 6,)



Four-Quadrant Translation



When the movement is upwards, it is moving forwards along the number line, so it is written as a positive number.

$(+7)$



Tues 14.3.23 pm

LO: To solve recipe problems



- 1) The ratio of lemons to apples is 4 : 1
Complete the ratio table.



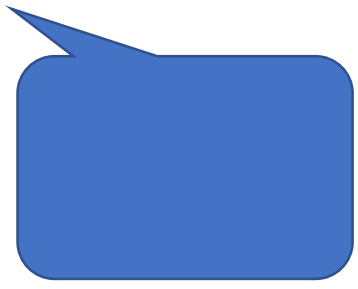
Lemons	Apples
4	1
12	
	6
40	

- 2) The ratio of boys to girls in a class is 2 : 3
There are 10 boys in the class. How many girls are there?

Boys

Girls

Whiteboards



- 1) The ratio of lemons to apples is 4 : 1     
- Complete the ratio table.

Lemons	Apples
4	1
12	
	6
40	

- 2) The ratio of boys to girls in a class is 2 : 3
There are 10 boys in the class. How many girls are there?

Boys

--	--

Girls

--	--	--

- 1) The ratio of lemons to apples is 4 : 1 
Complete the ratio table.

Lemons	Apples
4	1
12	3
24	6
40	10

Diagram illustrating the scaling of the ratio table. On the left, arrows show scaling from the first row to the others: $\times 3$ (4 to 12), $\times 6$ (4 to 24), and $\times 10$ (4 to 40). On the right, arrows show scaling from the first row to the others: $\times 3$ (1 to 3), $\times 6$ (1 to 6), and $\times 10$ (1 to 10).

- 2) The ratio of boys to girls in a class is 2 : 3
There are 10 boys in the class. How many girls are there?

	10		
Boys	5	5	
Girls	5	5	5

There are 15 girls.

Maths Three Repeating Golden Threads



Fluency

Quick and. efficient recall of facts and procedures

Mastery

Pupils acquire a deep, long-term, secure adaptable understanding

Application

The use of maths everyday in the real world, outside the classroom.



Mon

Crucial Vocab

ratio

scale

scale factor

represents

reduced

enlarged

proportion

Soup recipe



Serves 4 people.

1 onion

3 carrots

10 g cheese

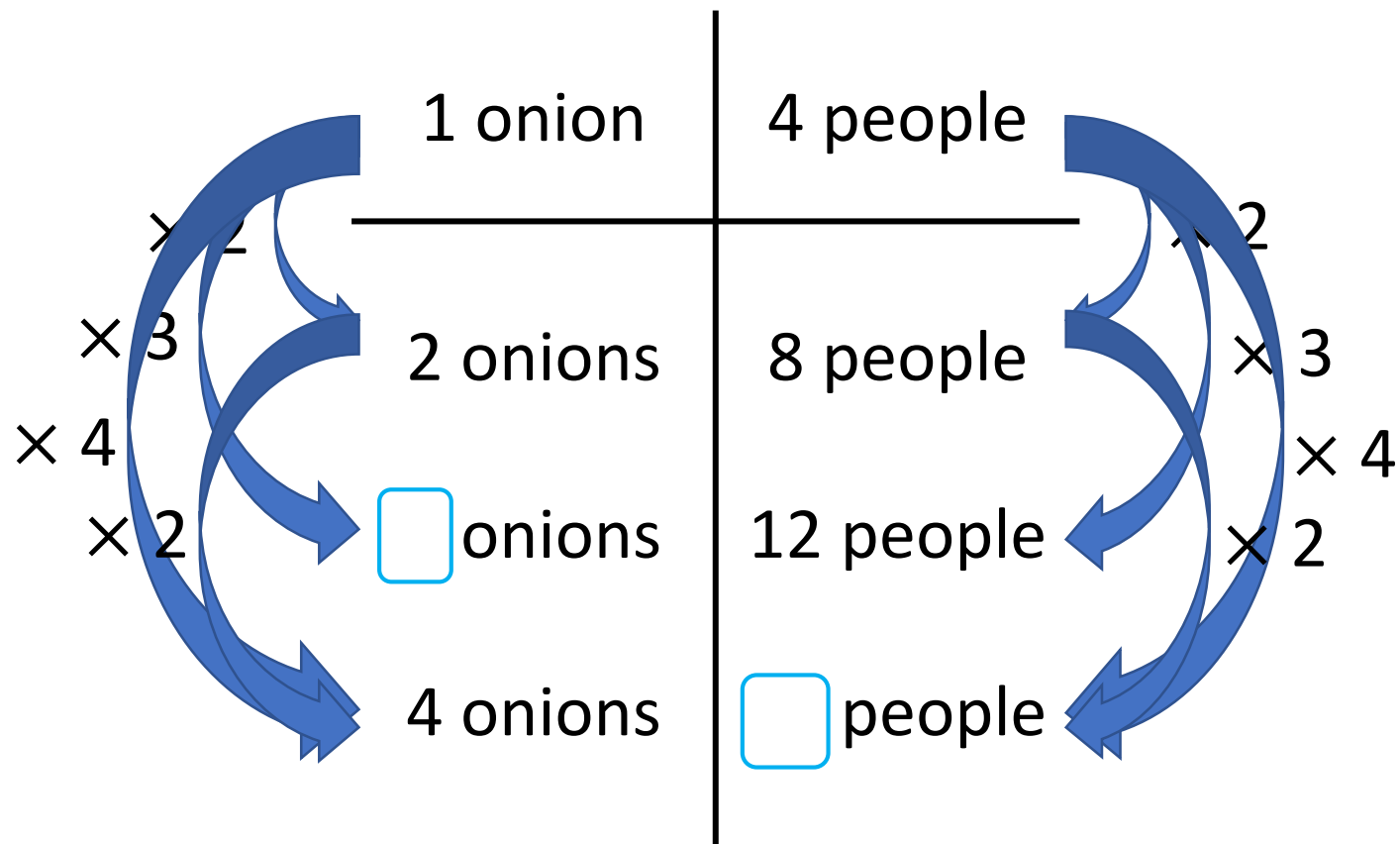
400 ml water

This recipe for soup
serves 4 people.

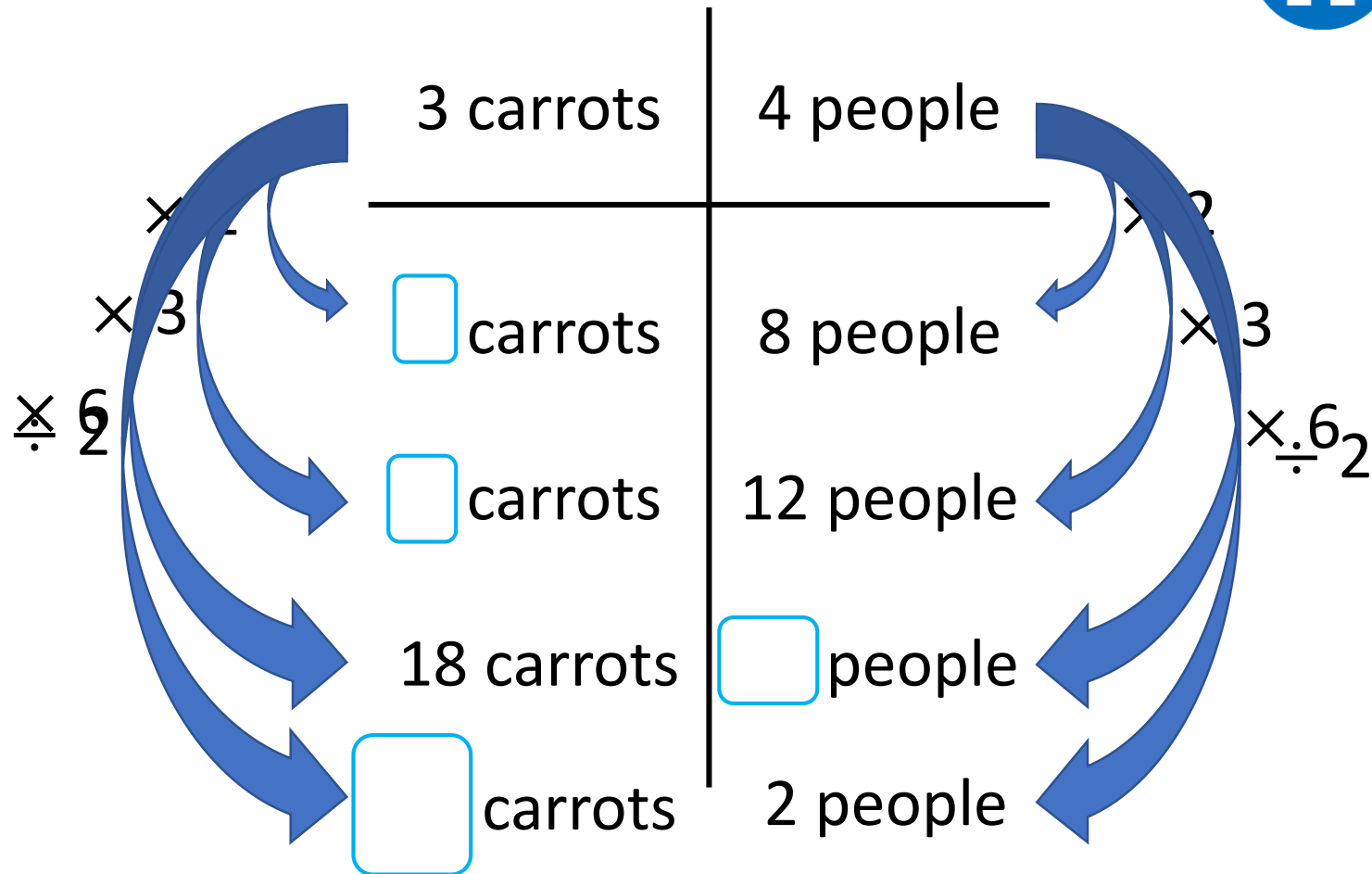
How much of each
ingredient would I
need for 8 people?

1 onion				1 onion			
1 person	1 person	1 person	1 person	1 person	1 person	1 person	1 person

If 1 onion serves 4 people, then onions would serve 8 people.



Have a think





Soup recipe



Serves 4 people.

1 onion

3 carrots

10 g cheese

400 ml water

Have a think



How much of each
ingredient would I
need for 10 people?

Soup recipe



Serves 4 people.

1 onion
3 carrots
10 g cheese
400 ml water

Have a think



How much of each
ingredient would I
need for 10 people?

Soup recipe



Serves 4 people.

1 onion
3 carrots
10 g cheese
400 ml water

Have a think



How much of each
ingredient would I
need for 10 people?

Soup recipe



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3 carrots
10 g cheese
400 ml water

Have a think



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Soup recipe



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3 carrots
10 g cheese
400 ml water

Have a think



How much of each
ingredient would I
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Soup recipe



Serves 4 people.

1 onion
3 carrots
10 g cheese
400 ml water

Have a think



How much of each
ingredient would I
need for 10 people?

Tues pm

Soup recipe



Serves 4 people.

1 onion

3 carrots

10 g cheese

400 ml water

×2



Soup recipe



Serves 8 people.

2 onions

6 carrots

20 g cheese

800 ml water

×2



Soup recipe



Serves 4 people.

1 onion

3 carrots

10 g cheese

400 ml water

$\div 2$



Soup recipe



Serves 2 people.

$\frac{1}{2}$ onion

$1\frac{1}{2}$ carrots

5 g cheese

200 ml water

$\div 2$



Soup recipe



Serves 8 people.

2 onions
6 carrots
20 g cheese
800 ml water

Soup recipe



Serves 2 people.

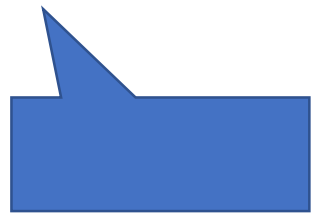
$\frac{1}{2}$ onion
 $1\frac{1}{2}$ carrots
5 g cheese
200 ml water

Soup recipe



Serves 10 people.

$2\frac{1}{2}$ onions
 $7\frac{1}{2}$ carrots
25 g cheese
1,000 ml water



This recipe makes 10 flapjacks.

Have a think



Flapjacks (makes 10)

120 g butter

100 g brown sugar

4 tablespoons golden syrup

250 g oats

40 g sultanas

Huan has 180 g of butter.

What is the greatest number of flapjacks he can make?

Butter (g)	Flapjacks
60	5
120	10
180	15

15 flapjacks.

$\div 2$
 $\times 3$

$\div 2$
 $\times 3$

- 1 Here are the ingredients needed to make 10 flapjacks.

Flapjacks (makes 10)

200 g butter
60 g sugar
360 g oats
40 ml golden syrup

- a) How much of each ingredient is needed to make 20 flapjacks?
 - b) How much of each ingredient is needed to make 5 flapjacks?
 - c) How much of each ingredient is needed to make 1 flapjack?
- Compare methods with a partner.

- 1 Here are the ingredients needed to make 10 flapjacks.

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200 g butter
60 g sugar
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 - c) How much of each ingredient is needed to make 1 flapjack?
- Compare methods with a partner.

Tues pm



- 3 Here is a list of ingredients for 8 cupcakes.

Complete the lists of ingredients.

a)

Cupcakes (makes 4)	
	butter
	sugar
	eggs
	vanilla extract
	flour
	milk

Cupcakes (makes 8)

100 g butter
100 g sugar
2 eggs
1 tsp vanilla extract
120 g flour
4 tbsp milk

Copy into books

3

b)

Cupcakes (makes 24)

butter

sugar

eggs

vanilla extract

flour

milk

c)

Cupcakes (makes 12)

butter

sugar

eggs

vanilla extract

flour

milk

3

d)

Cupcakes (makes)

butter

sugar

16 eggs

vanilla extract

960 g flour

milk

3

b)

Cupcakes (makes 24)

butter

sugar

eggs

vanilla extract

flour

milk

c)

Cupcakes (makes 12)

butter

sugar

eggs

vanilla extract

flour

milk

3

d)

Cupcakes (makes)

butter

sugar

16 eggs

vanilla extract

960 g flour

milk

Question	Answer
1	a) butter 400 g sugar 120 g oats 720 g golden syrup 80 ml b) butter 100 g sugar 30 g oats 180 g golden syrup 20 ml c) butter 20 g sugar 6 g oats 36 g golden syrup 4 ml Double the quantities for part a), halve them for part b) and divide by 10 for part c).
2	a) butter 40 g sugar 24 g plain flour 60 g chocolate chips 20 g b) butter 200 g sugar 120 g plain flour 300 g chocolate chips 100 g c) 24

- a) **Cupcakes (makes 4)**
- 50 g butter
 - 50 g sugar
 - 1 eggs
 - 0.5 tsp vanilla extract
 - 60 g flour
 - 2 tbsp milk
- b) **Cupcakes (makes 24)**
- 300 g butter
 - 300 g sugar
 - 6 eggs
 - 3 tsp vanilla extract
 - 360 g flour
 - 12 tbsp milk
- c) **Cupcakes (makes 12)**
- 150 g butter
 - 150 g sugar
 - 3 eggs
 - 1.5 tsp vanilla extract
 - 180 g flour
 - 6 tbsp milk
- d) **Cupcakes (makes 64)**
- 800 g butter
 - 800 g sugar
 - 16 eggs
 - 8 tsp vanilla extract
 - 960 g flour
 - 32 tbsp milk
- e) 40

STARTER TASK

Weds- copy into back
of Maths books

Order of Operations

B	Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$
O	Order	$5 + 2^2 = 5 + 4 = 9$
D	Division	$10 + 6 \div 2 = 10 + 3 = 13$
M	Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$
A	Addition	$10 \times 4 + 7 = 40 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$

1. $30 \times 5 + 267 =$

2. $(138 + 99) \times 3 =$

3. $4500 \div 9 - 143 =$

4. $780 \times 3 - 1340 =$

5. $(1340 + 1160) \div 50 =$

6. $1400 \div (37 + 33) =$

Calculate

Perform these mental calculations, explaining your method:

1. $30 \times 5 + 267 = 417$

2. $(138 + 99) \times 3 = 711$

3. $4500 \div 9 - 143 = 357$

4. $780 \times 3 - 1340 = 1000$

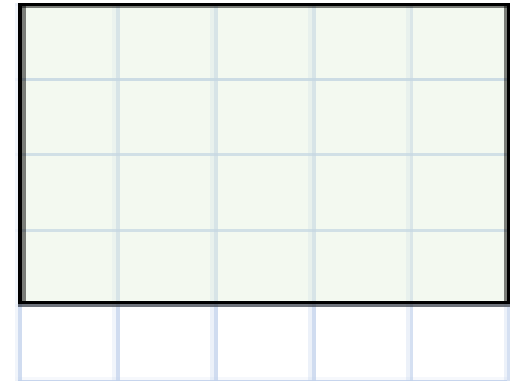
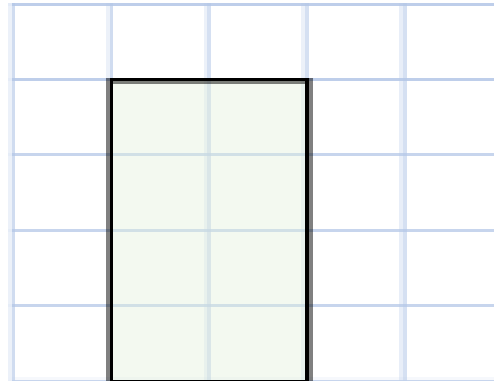
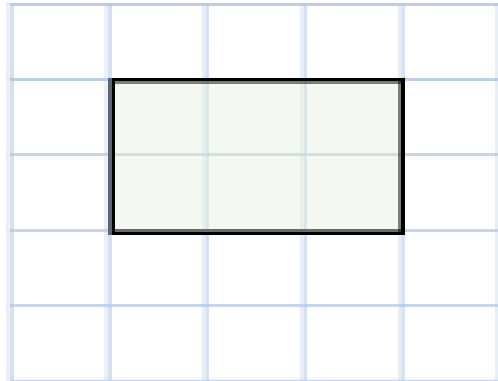
5. $(1340 + 1160) \div 50 = 50$

6. $1400 \div (37 + 33) = 20$

Weds 15.3.23

LO: To find shapes with same area

- 1) Work out the area of the shapes.
Each square represents 1 cm^2

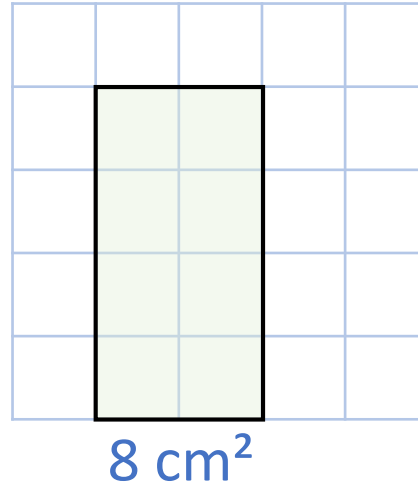
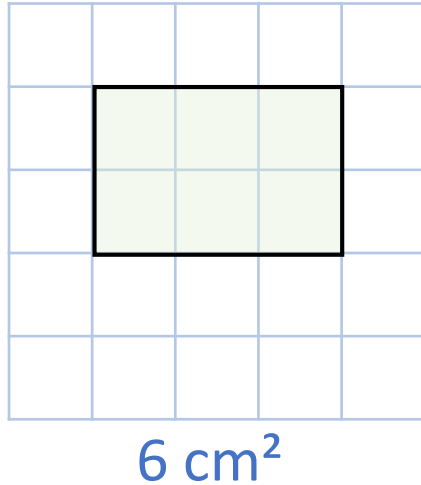


- 2) Find all the factors of 20

Whiteboards

- 3) Find all the factors of 16

- 1) Work out the area of the shapes.
Each square represents 1 cm^2



- 2) Find all the factors of 20 1, 2, 4, 5, 10, 20

- 3) Find all the factors of 16 1, 2, 4, 8, 16

Maths Three Repeating Golden Threads



Fluency

Quick and. efficient recall of facts and procedures

Mastery

Pupils acquire a deep, long-term, secure adaptable understanding

Application

The use of maths everyday in the real world, outside the classroom.



Crucial Vocabulary

Whiteboards

metre

kilometre

perimeter

length

width

rectangle

rectilinear

dimensions

metre
kilometre
perimeter
length
width
rectangle
rectilinear
dimensions

metre
kilometre
perimeter
length
width
rectangle
rectilinear
dimensions

wed
s

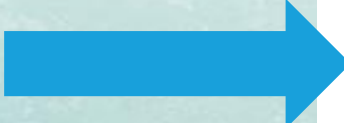
metre
kilometre
perimeter
length
width
rectangle
rectilinear
dimensions

metre
kilometre
perimeter
length
width
rectangle
rectilinear
dimensions

Term Spring 2 Week beginning 13/3/23

Block Area and perimeter

Key vocabulary metre perimeter kilometre
length width rectangle dimensions rectilinear



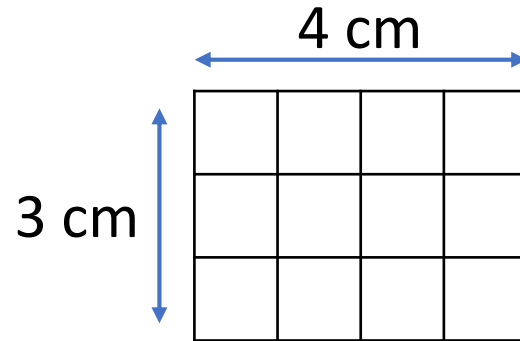
	B	W	S
Shapes - same area			
Area and perimeter			
Area of a triangle - counting squares			
Area of a right-angled triangle			
Area of any triangle			
Area of a parallelogram			
Volume - counting cubes			
Volume of a cuboid			

Stem sentences

- The total number of squares in the rectangle is ____
- The area of the rectangle is ____cm²
- The area of the rectangle is cm²
- The formula to find the area of a rectangle is ...
- To find the perimeter of a rectangle, I ...
- The area of the right-angled triangle is the area of the rectangle.
- The formula for the area of a triangle is ...

Use the diagram to complete the sentences.

Each square represents 1 cm^2



Length $\times$ Width

Have a think



The length of the rectangle is cm.

The width of the rectangle is cm.

The total number of squares in the rectangle is

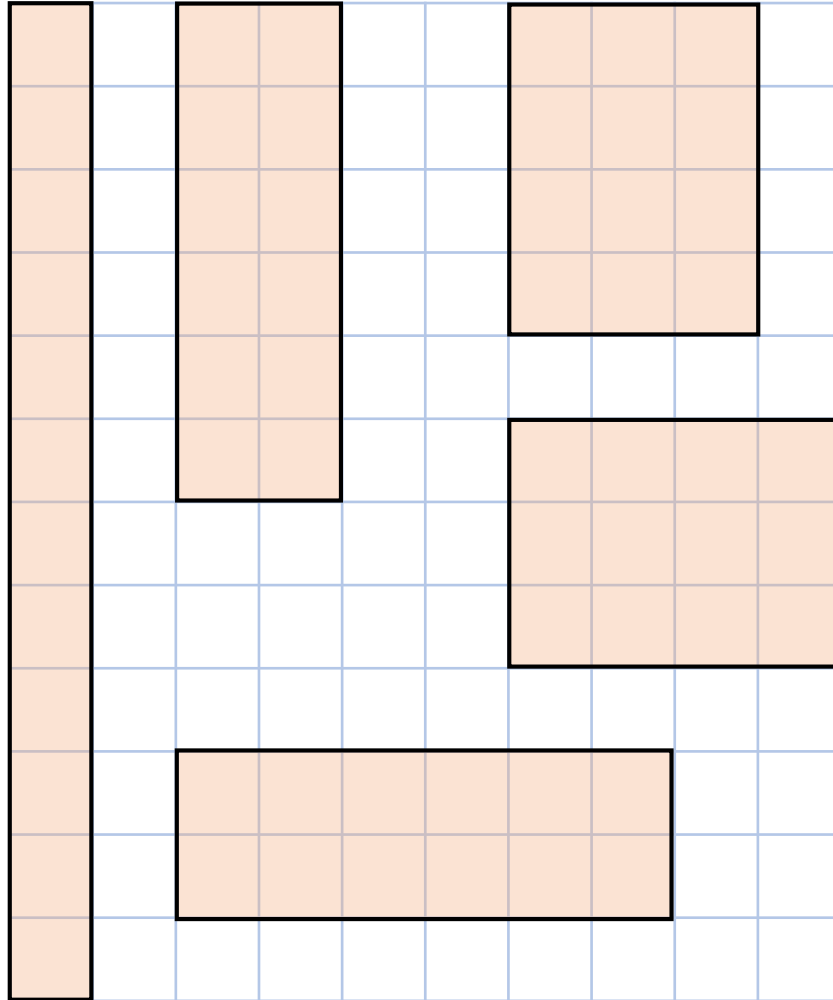
The area of the rectangle is cm^2



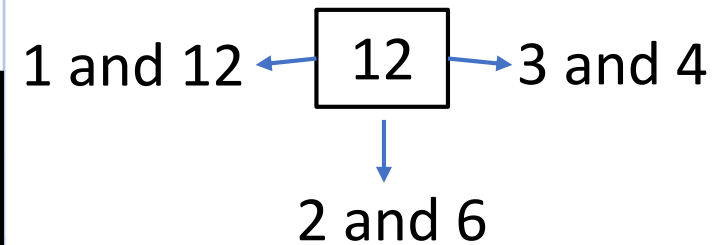
shutterstock.com - 15201662

Draw a rectangle that has an area of 12 cm^2

Each square represents 1 cm^2

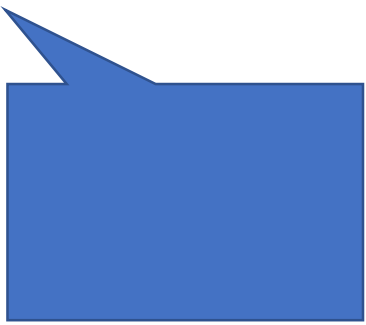


$$\text{Length} \times \text{Width} = 12 \text{ cm}^2$$



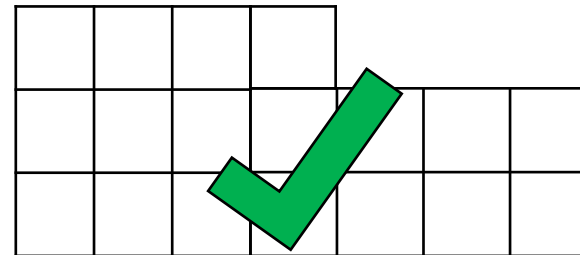
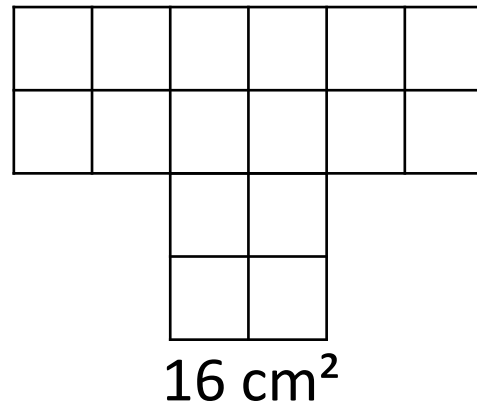
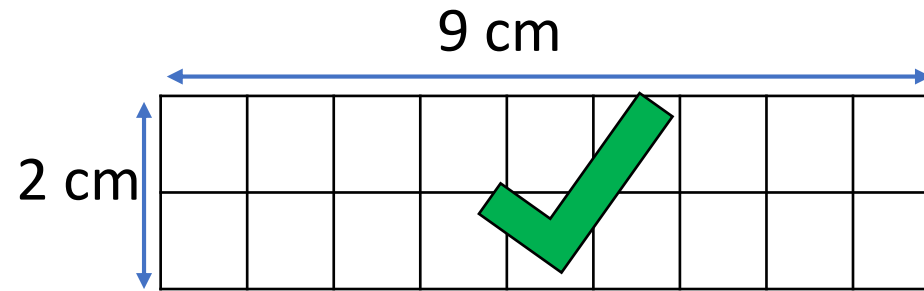
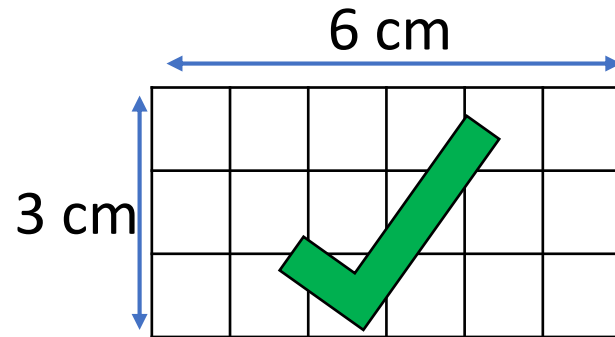
Have a think





Which shapes have an area of 18 cm^2 ?

Each square represents 1 cm^2

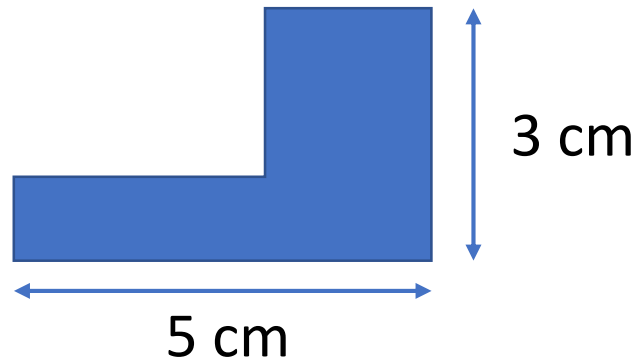


Have a think

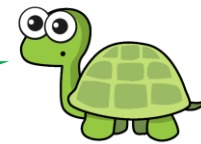




shutterstock.com - 15201662



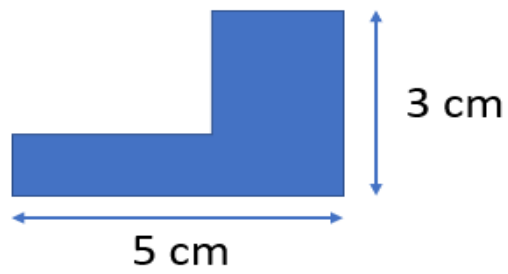
The area is 15 cm^2 because 5 multiplied by 3 is 15



Do you agree with Tiny?

Have a think



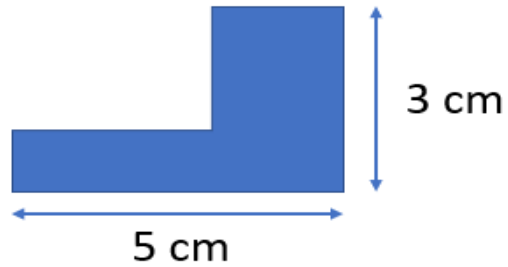


weds

The area is 15 cm^2 because 5 multiplied by 3 is 15



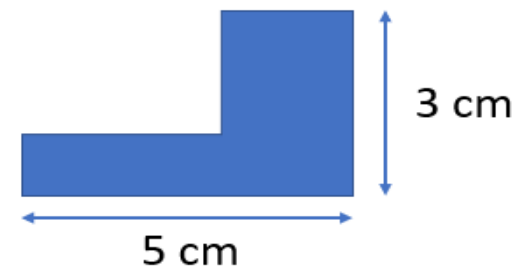
Do you agree with Tiny?



The area is 15 cm^2 because 5 multiplied by 3 is 15



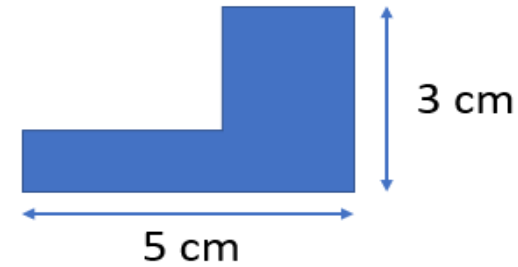
Do you agree with Tiny?



The area is 15 cm^2 because 5 multiplied by 3 is 15



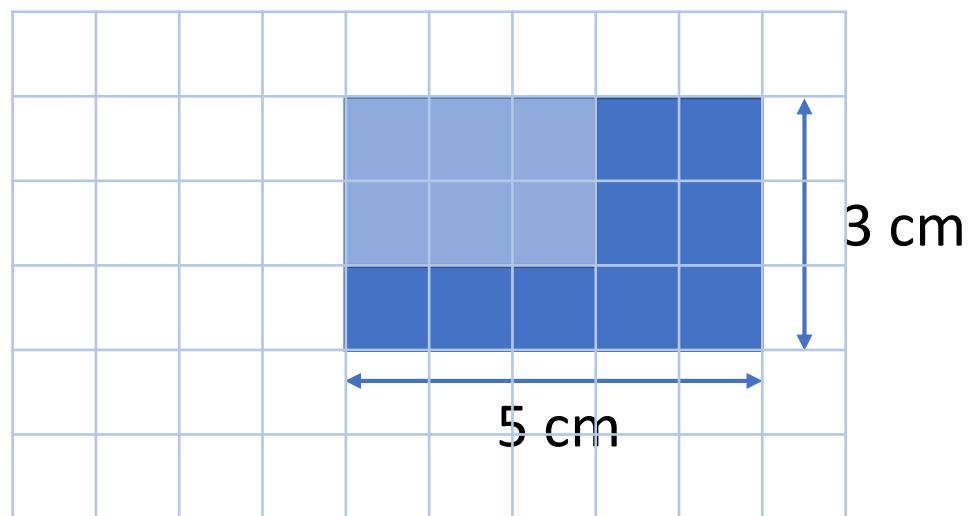
Do you agree with Tiny?



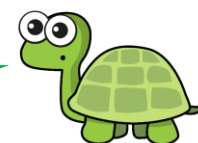
The area is 15 cm^2 because 5 multiplied by 3 is 15



Do you agree with Tiny?



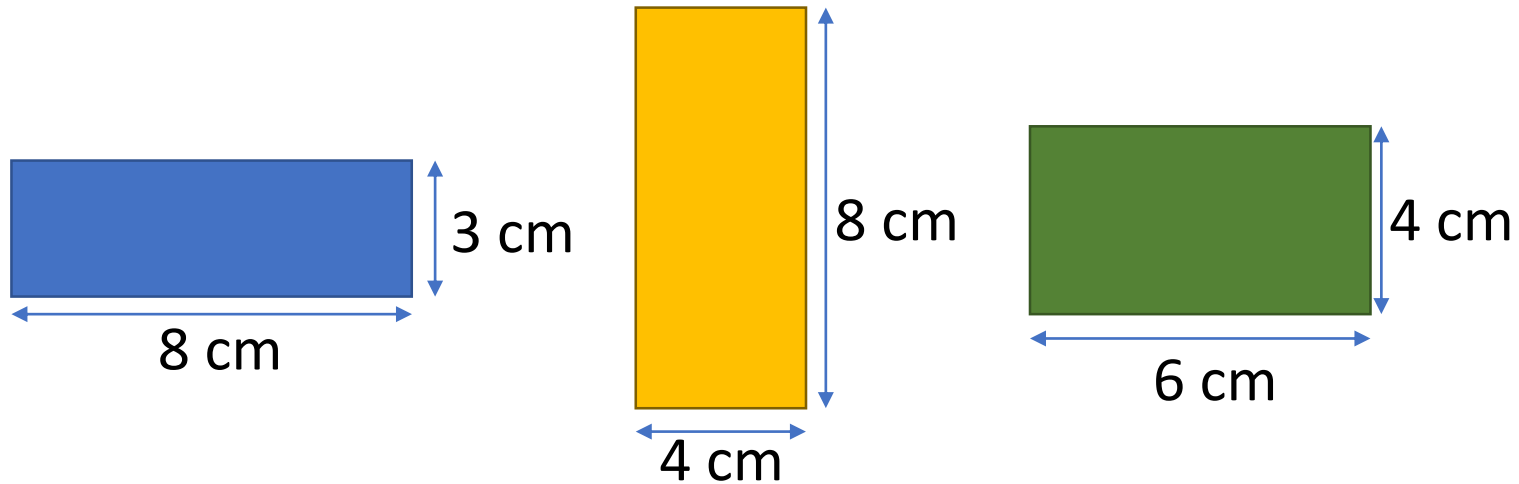
The area is 15 cm^2 because 5 multiplied by 3 is 15



9 cm^2

Each square represents 1 cm^2

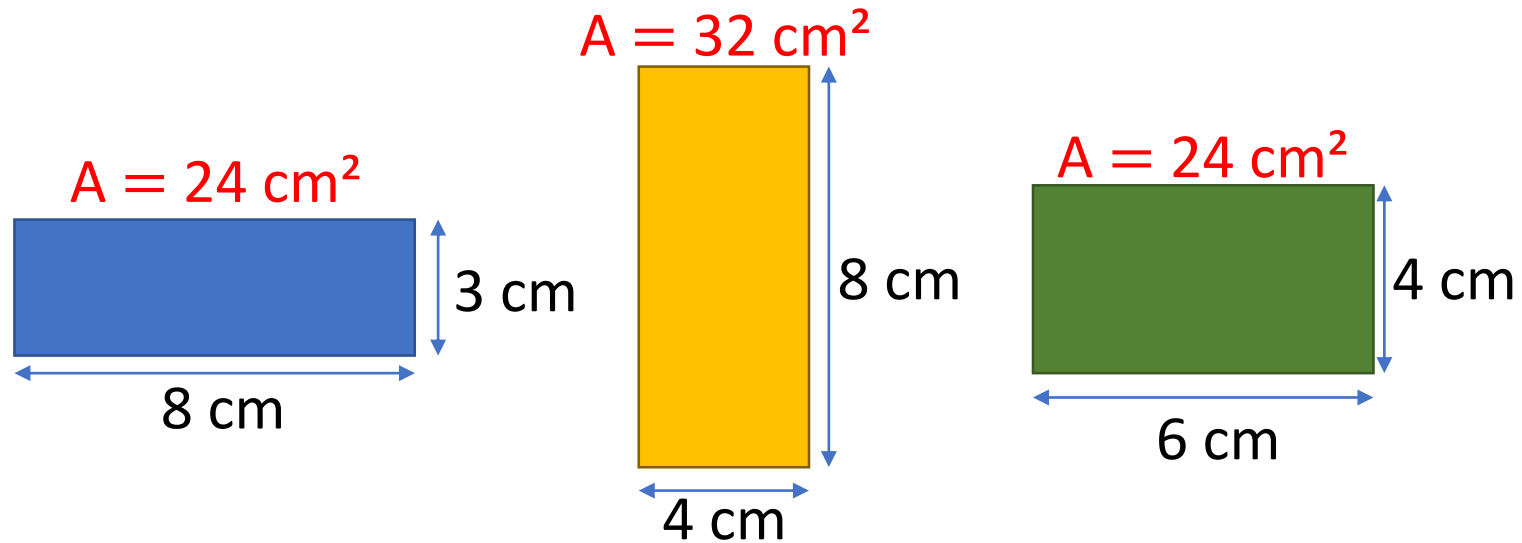
Which two rectangles have the same area?



How do you know?

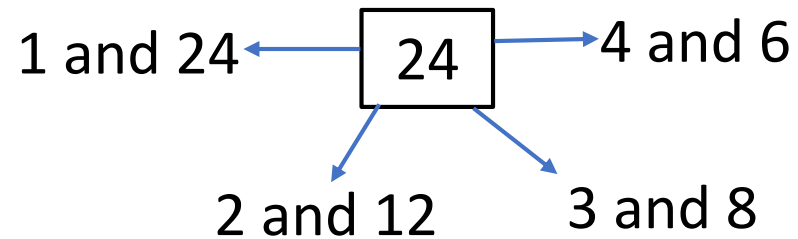
Have a think 

Which two rectangles have the same area?



How do you know?

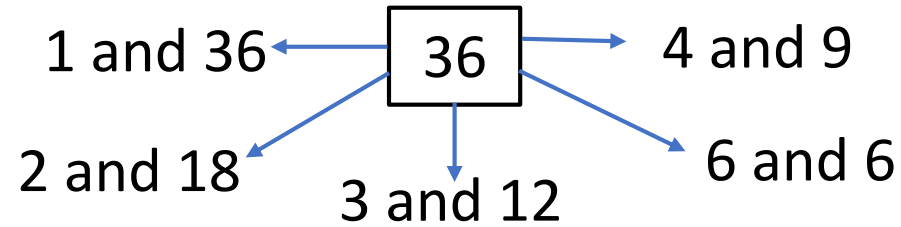
Length $\times$ Width





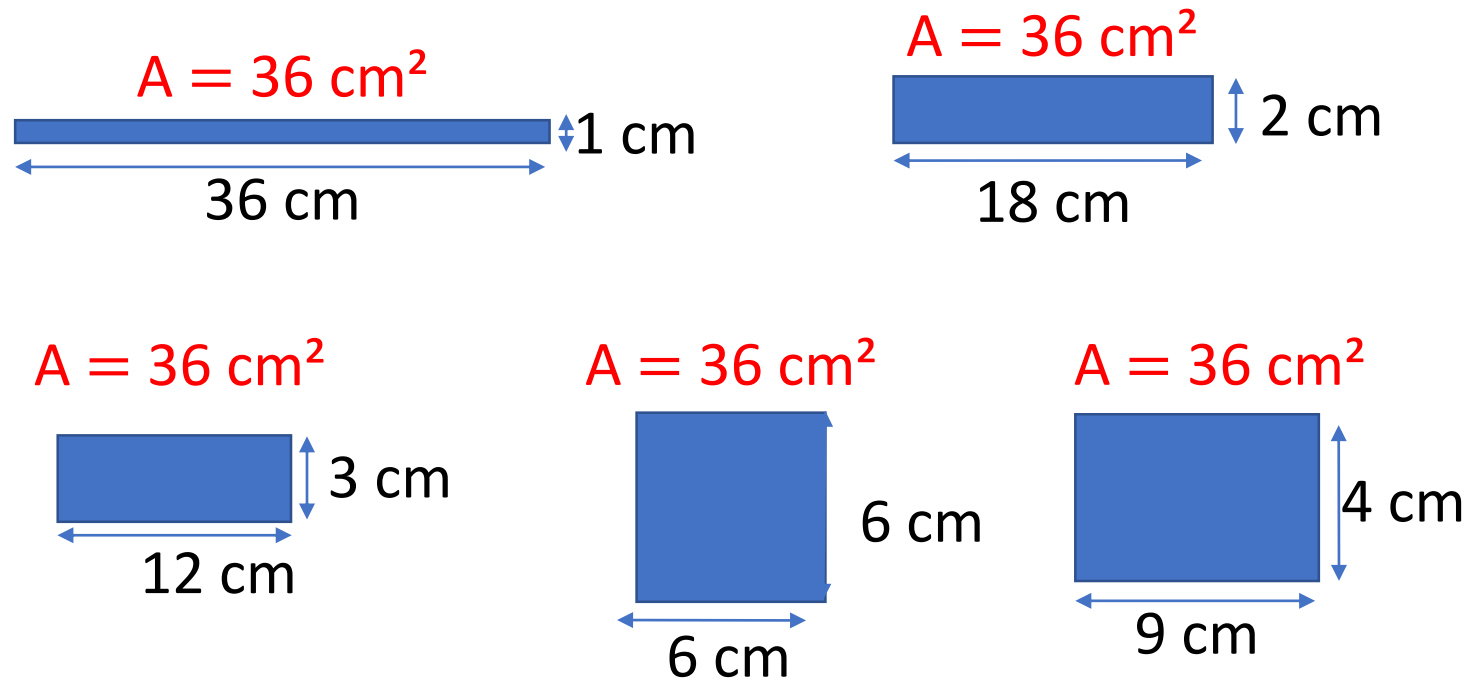
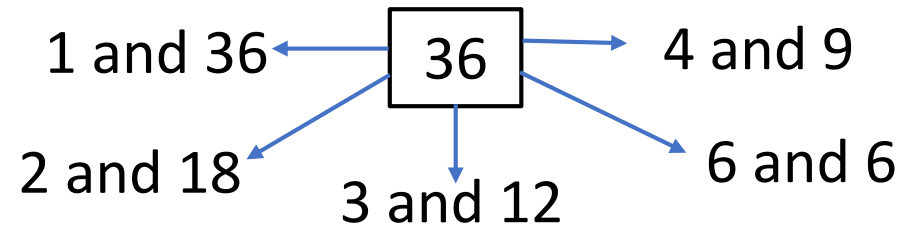
Draw as many rectangles as possible that have
an area of 36 cm^2

All the side lengths are whole numbers.



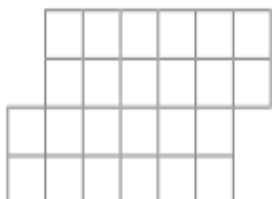
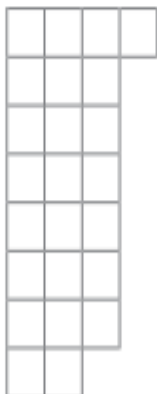
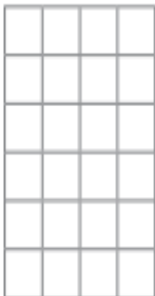
Have a think





Not drawn to scale.

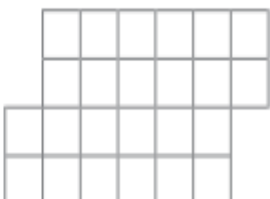
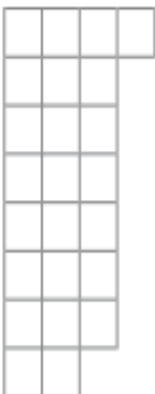
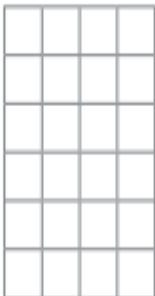
4

Which shapes have an area of 24 cm^2 ?Each square represents 1 cm^2 

5

Draw two different rectilinear shapes that have an area of 12 cm^2 .
Compare shapes with a partner.

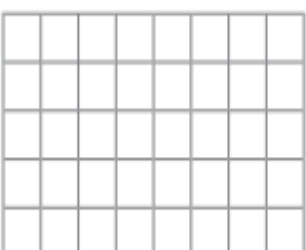
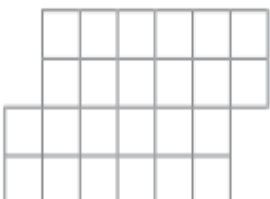
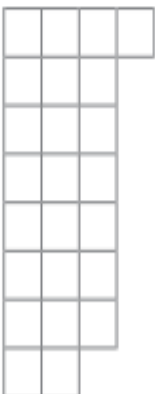
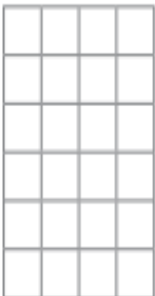
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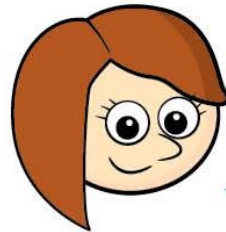
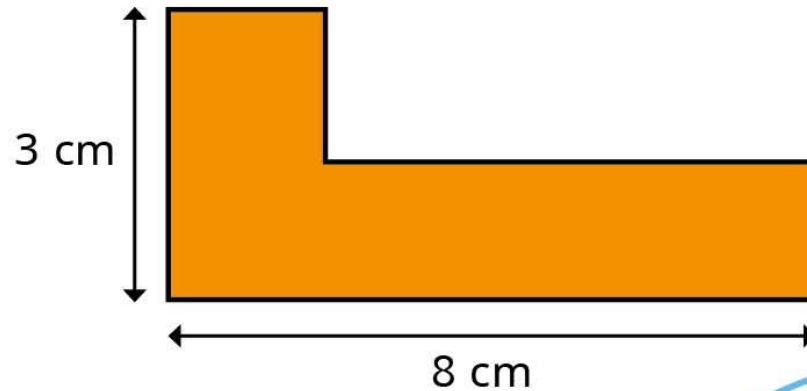
5

Draw two different rectilinear shapes that have an area of 12 cm^2 .
Compare shapes with a partner.





- 6 Rosie is finding the area of this shape.



To find the area of the shape, I can multiply 3 by 8, so the area must be 24 cm^2

Do you agree with Rosie? _____

Explain your answer.

6

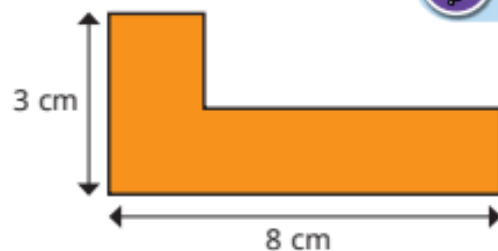
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Explain your answer.



6

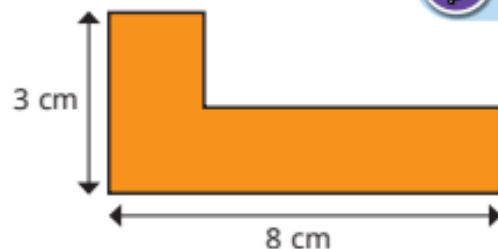
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6

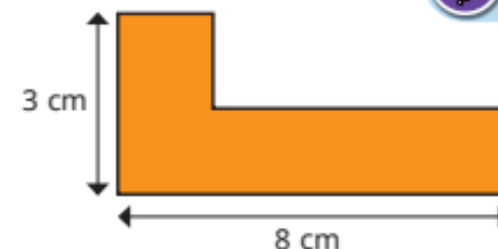
Rosie is finding the area of this shape.



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Do you agree with Rosie?

Explain your answer.



6

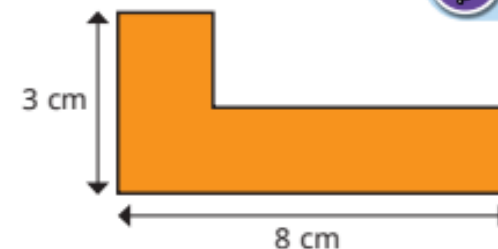
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To find the area of the shape, I can multiply 3 by 8, so the area must be 24 cm^2

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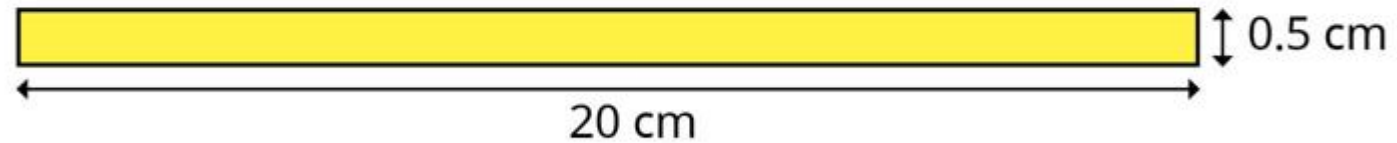
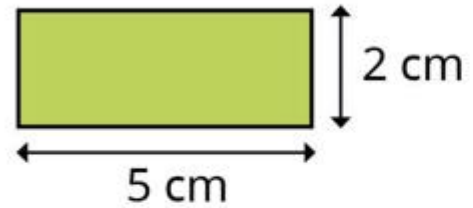
Explain your answer.



wed
s

Hex/ Oct Weds

Which rectangle has the greatest area?

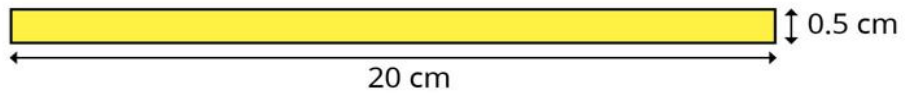
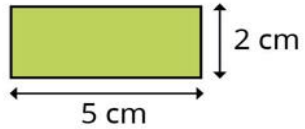


Sketch the next rectangle in the pattern.

What is its area?

How do you know?

Which rectangle has the greatest area?

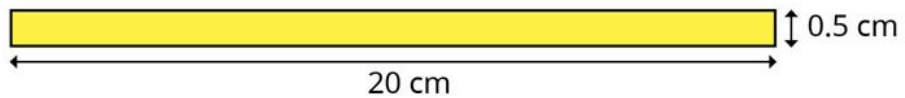
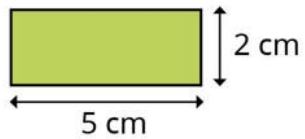


Sketch the next rectangle in the pattern.

What is its area?

How do you know?

Which rectangle has the greatest area?

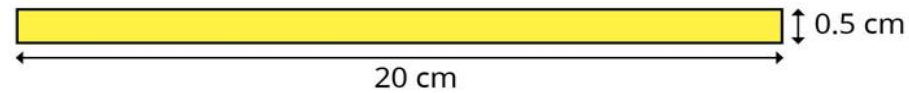
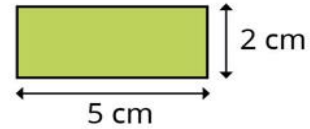


Sketch the next rectangle in the pattern.

What is its area?

How do you know?

Which rectangle has the greatest area?

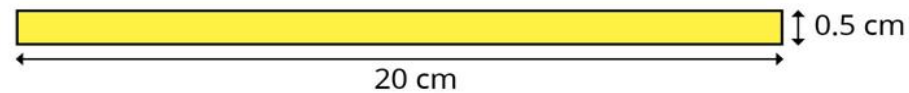
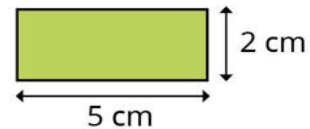


Sketch the next rectangle in the pattern.

What is its area?

How do you know?

Which rectangle has the greatest area?



Sketch the next rectangle in the pattern.

What is its area?

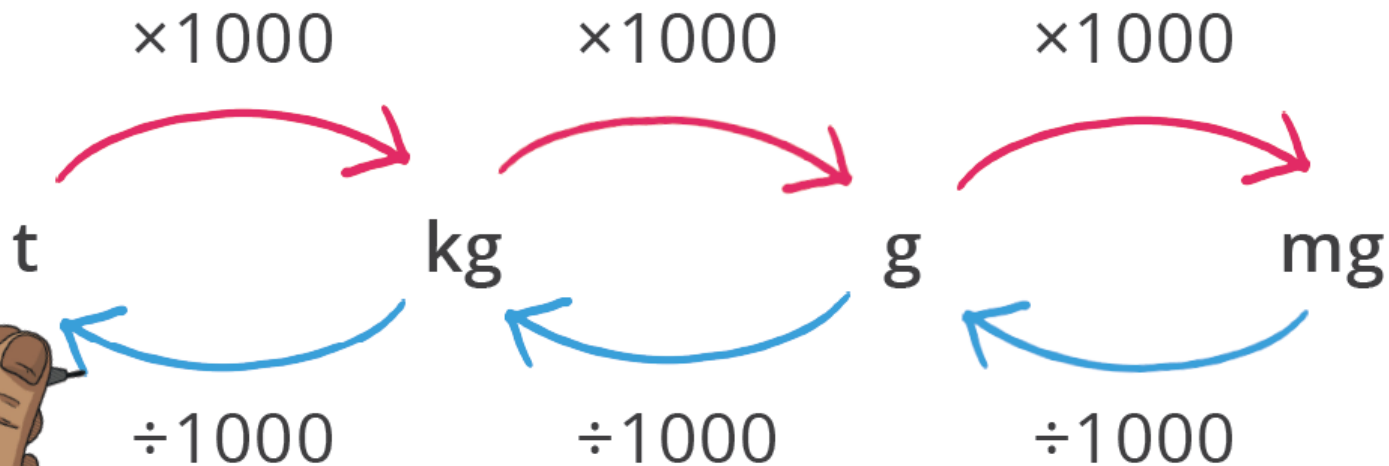
How do you know?

Hex/ Oct Weds

Maths Meeting- Weds

Multi-step
word problems
involving
measure

Converting between Metric Units: **Mass**



Converting measures

5.

Litres	Millilitres
	216
	128
0.23	

€

5.

Kilometres	Metres
	180
	485
0.95	

.

Kilograms	Grams
	819
	236
0.292	

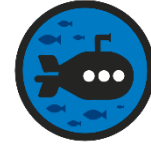
Six 360ml cups are filled from a 2.3l flask of coffee. How much coffee is now left in the flask? Give your answer in litres.



Flask = 2.3l						
Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	0.14l

How much is left?





Finlay has a piece of string which measures 0.9m. He cuts off a piece measuring 15cm and then cuts the remaining string into three equal pieces. How long is each piece?

Three children record their answer to this problem:



11:58

Calculate with Metric Measures

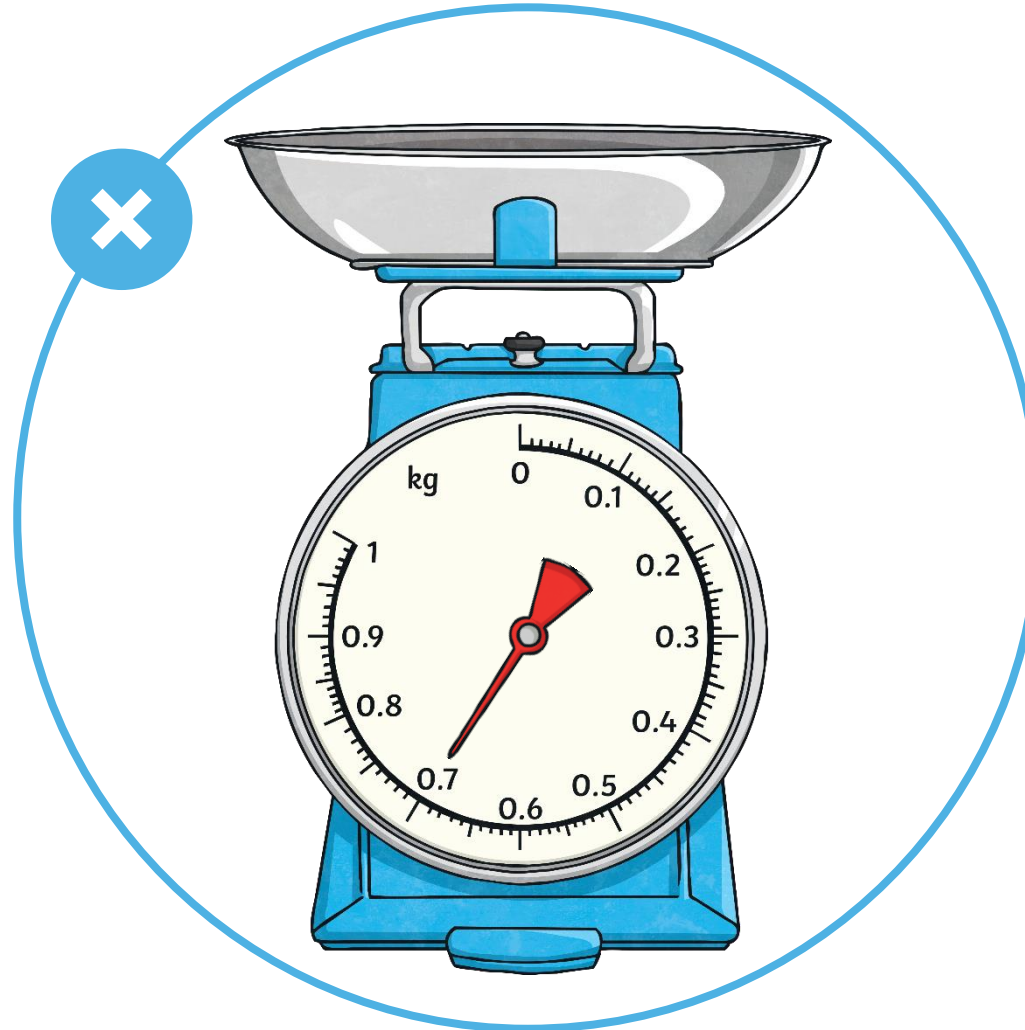


What is the total mass in kilograms of the contents of the rucksacks?

2.78kg

Mass of rucksack contents:
Rucksack C 0.35kg
Rucksack A 0.8kg
Rucksack B 80g
Rucksack E 0.7kg
Rucksack D 850g =

scale



STARTER TASK

Thurs

Ratio

B

Name _____

1 Complete the sentences.



For every 1 cherry, there are plums.



For every 2 bananas, there are carrots.

2 Complete the sentence.



For every 1 cylinder, there are cubes.



1 mark



1 mark



1 mark

3 Alex has these coins.



Whitney has these coins.



Alex says that for every 3 coins she has, Whitney has 5 coins.

Is Alex correct? yes no

Explain or show why.



1 mark



The ratio of circles to squares is :



Complete the ratio in 2 different ways.

The ratio of rectangles to triangles is :

The ratio of rectangles to triangles is :



1 mark



2 marks



2 marks

5 Circle the equivalent ratios.

2 : 10 1 : 5 3 : 12 8 : 4 3 : 15



- 6 Part of a bar is shaded.



What fraction of the bar is shaded? _____



1 mark

What is the ratio of shaded parts to non-shaded parts?



1 mark

- 7 For every 4 boys in a class, there are 2 girls.



There are 24 children in the class.
How many girls are there?



2 marks

- 8 The ratio of red to blue cubes in a tower is 1 : 5
There are 6 red cubes in the tower.
How many cubes are blue?



1 mark

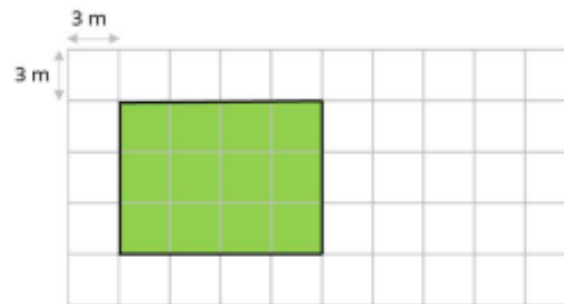
- 9 Eva has some red and green grapes.
For every 5 green grapes, she has 3 red grapes.
She has 35 green grapes.

How many more green grapes than red grapes
does Eva have?



2 marks

- 10 A field is drawn to scale.
Each square on the grid represents 3 m.



What is the length of the field? _____ m



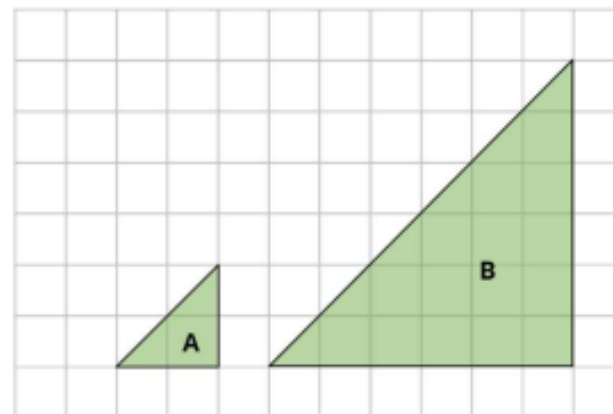
1 mark

Another field is 9 m long and 6 m wide.
Draw this field on the grid above.



2 marks

- 11 Here are two triangles.
Triangle B is an enlargement of triangle A.



What is the scale factor of enlargement? _____



1 mark



Ratio

Name _____

1 Complete the sentences.

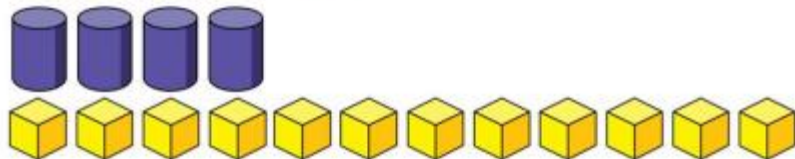


For every 1 cherry, there are plums.



For every 2 bananas, there are carrots.

2 Complete the sentence.



For every 1 cylinder, there are cubes.

☐ 1 mark

☐ 1 mark

☐ 1 mark

3 Alex has these coins.



Whitney has these coins.



Alex says that for every 3 coins she has, Whitney has 5 coins.

Is Alex correct? yes ☒ no

Explain or show why.

No because Alex has 4 coins and Whitney has 10, so for every 2 coins that Alex has, Whitney has 5.

☐ 1 mark



The ratio of circles to squares is :



Complete the ratio in 2 different ways.

The ratio of rectangles to triangles is :

The ratio of rectangles to triangles is :

☐ 1 mark

☐ 2 marks

5 Circle the equivalent ratios. 1 mark for 2 correct.

☒ 2 : 10 ☒ 1 : 5 3 : 12 8 : 4 ☒ 3 : 15

☐ 2 marks

White
Dress

- 6 Part of a bar is shaded.



What fraction of the bar is shaded?

$\frac{2}{5}$



1 mark

What is the ratio of shaded parts to non-shaded parts?

2:3



1 mark

- 7 For every 4 boys in a class, there are 2 girls.



There are 24 children in the class.

How many girls are there?

2 marks for the correct answer.

1 mark for calculating that 1 part is worth 6

$24 \div 6 = 4$

8



2 marks

- 8 The ratio of red to blue cubes in a tower is 1 : 5

There are 6 red cubes in the tower.

How many cubes are blue?

30



1 mark

- 9 Eva has some red and green grapes.
For every 5 green grapes, she has 3 red grapes.
She has 35 green grapes.

How many more green grapes than red grapes does Eva have?

2 marks for the correct answer.

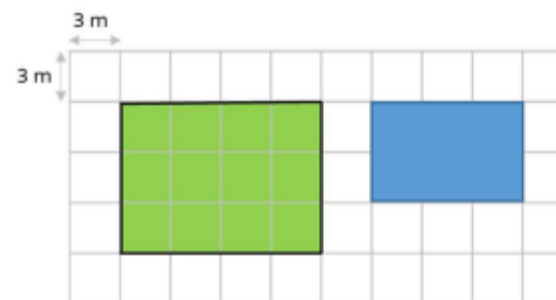
1 mark for $35 \div 5 = 7$ and $7 \times 3 = 21$

14



2 marks

- 10 A field is drawn to scale.
Each square on the grid represents 3 m.



What is the length of the field?

12 m



1 mark

Another field is 9 m long and 6 m wide.

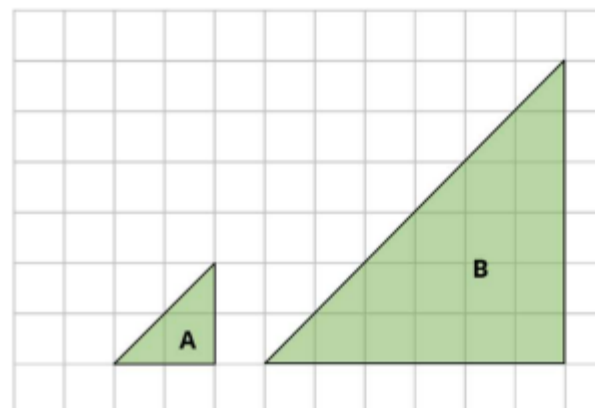
Draw this field on the grid above.

1 mark for the length and 1 mark for the width.



2 marks

- 11 Here are two triangles.
Triangle B is an enlargement of triangle A.



What is the scale factor of enlargement?

3

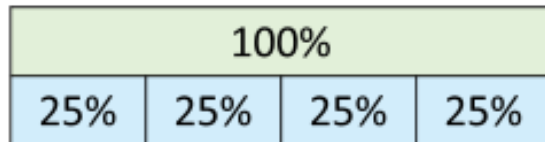


1 mark

Thurs 16.3.23

LO: To find area and perimeter of shapes

1)



$25\% = 52$

$100\% = \boxed{}$



2)

$$\text{Calculate } 50\% \text{ of } 480 = \boxed{}$$



3)

$$1 \text{ book} + 3 \text{ packs of crayons} = \text{£}8.00$$

$$1 \text{ pack of crayons} = \boxed{}$$

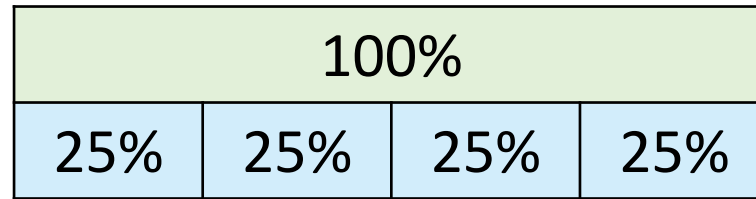


4)



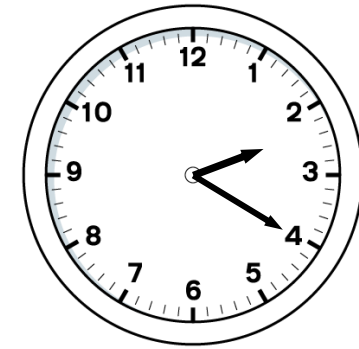
Whiteboards

1)



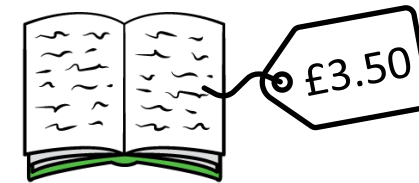
$25\% = 52$

$100\% = \boxed{}$



2)

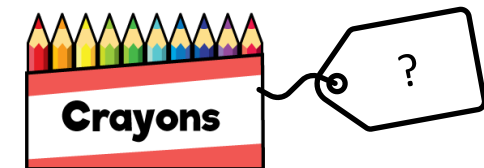
$\text{Calculate } 50\% \text{ of } 480 = \boxed{}$



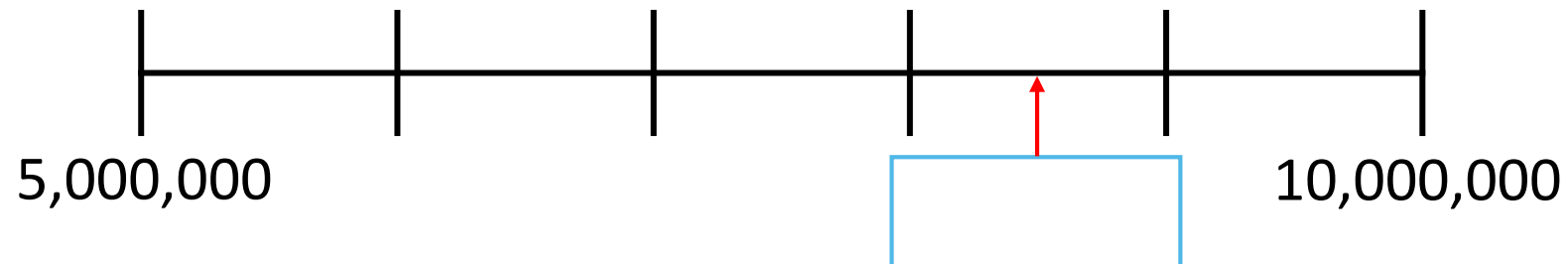
3)

$1 \text{ book} + 3 \text{ packs of crayons} = \text{£}8.00$

$1 \text{ pack of crayons} = \boxed{}$



4)

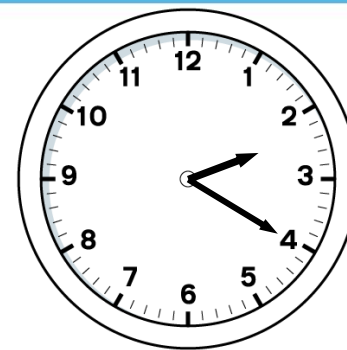


1)

100%			
25%	25%	25%	25%

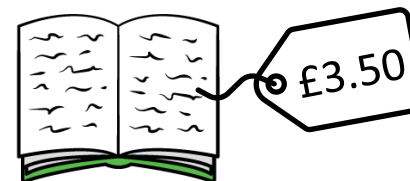
$25\% = 52$

$100\% = \boxed{}$



2)

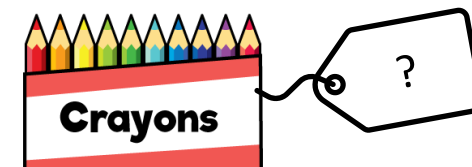
$\text{Calculate } 50\% \text{ of } 480 = \boxed{}$



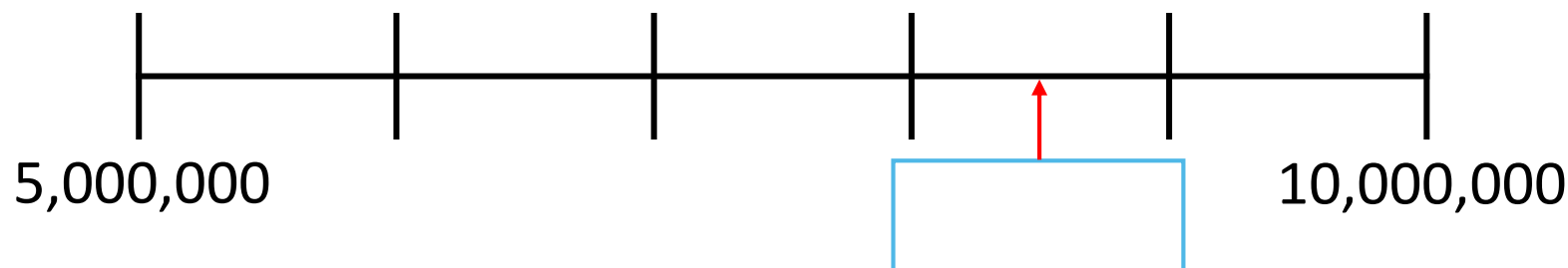
3)

$1 \text{ book} + 3 \text{ packs of crayons} = \text{£}8.00$

$1 \text{ pack of crayons} = \boxed{}$



4)



Maths Three Repeating Golden Threads



Fluency

Quick and. efficient recall of facts and procedures

Mastery

Pupils acquire a deep, long-term, secure adaptable understanding

Application

The use of maths everyday in the real world, outside the classroom.



Crucial Vocabulary

metre

kilometre

perimeter

length

width

rectangle

area

metre	metre	metre	metre	metre
kilometre	kilometre	kilometre	kilometre	kilometre
perimeter	perimeter	perimeter	perimeter	perimeter
length	length	length	length	length
width	width	width	width	width
rectangle	rectangle	rectangle	rectangle	rectangle
area	area	area	area	area

Thurs

Term Spring 2 Week beginning 13/3/23

Block Area and perimeter

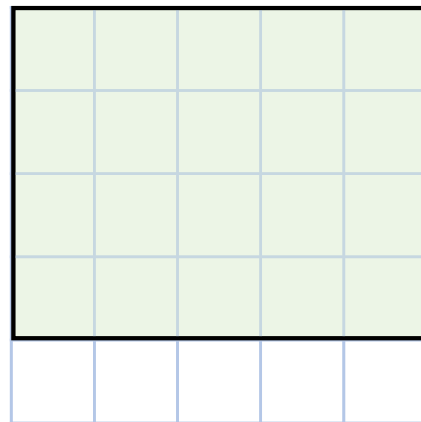
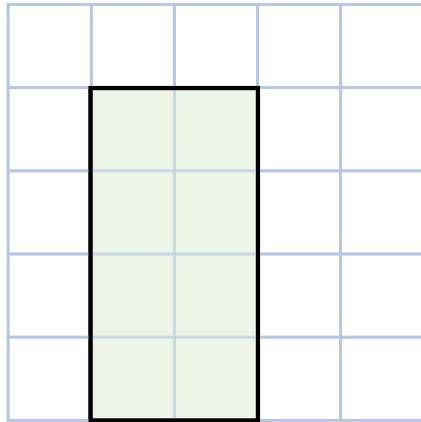
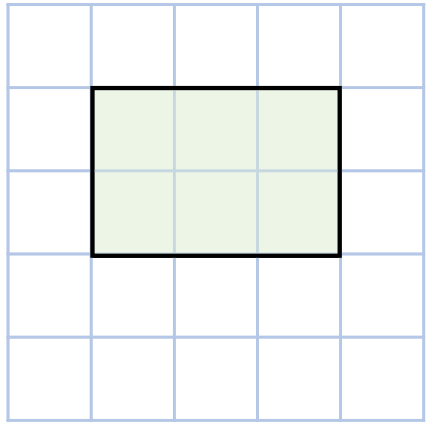
Key vocabulary metre perimeter kilometre
length width rectangle dimensions rectilinear

	B	W	S
Shapes - same area			
Area and perimeter			
Area of a triangle - counting squares			
Area of a right-angled triangle			
Area of any triangle			
Area of a parallelogram			
Volume - counting cubes			
Volume of a cuboid			

Stem sentences

- The total number of squares in the rectangle is ____
- The area of the rectangle is ____cm²
- The area of the rectangle is cm²
- The formula to find the area of a rectangle is ...
- To find the perimeter of a rectangle, I ...
- The area of the right-angled triangle is the area of the rectangle.
- The formula for the area of a triangle is ...

- 
- 1) Work out the perimeter of the shapes.
Each square represents 1 cm^2

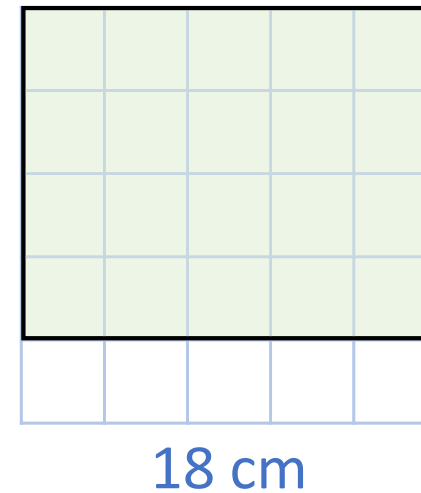
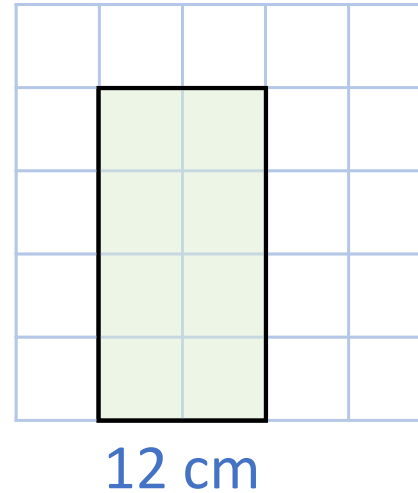
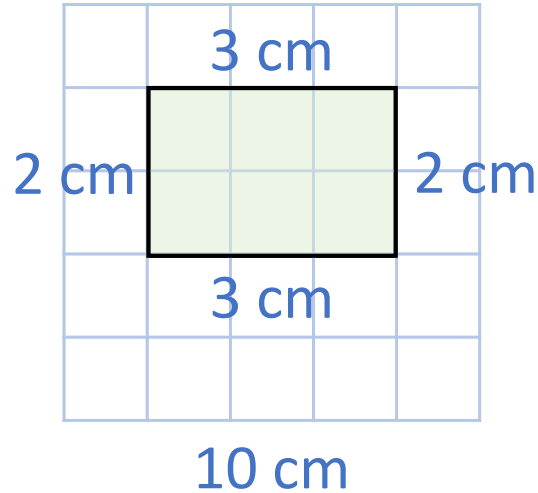


2) $2a + 2b = 20$

Find the value of b if $a = 8$

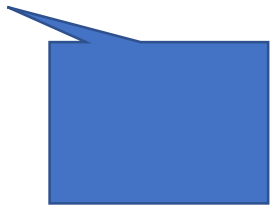
3) $8 \times \square = 72$

- 1) Work out the perimeter of the shapes.
Each square represents 1 cm^2

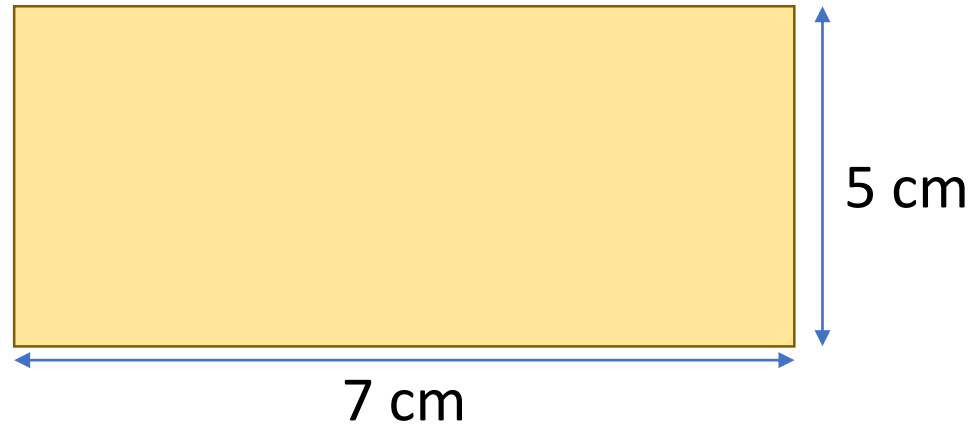


2) $2a + 2b = 20$ Find the value of b if $a = 8$
 2×8 $16 + 2b = 20$ $2b = 4$ $b = 2$

3) $8 \times \square = 72$



Find the perimeter and area of this rectangle.



The formula to find the perimeter of a rectangle is: $\underline{2l + 2w}$

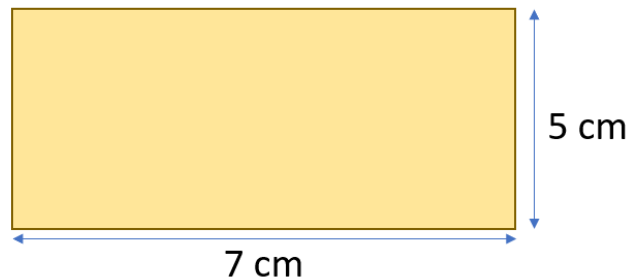
$$2 \times 7 + 2 \times 5 = 24 \text{ cm}$$

The formula to find the area of a rectangle is: $\underline{l \times w}$

$$7 \times 5 = 35 \text{ cm}^2$$

Have a think 

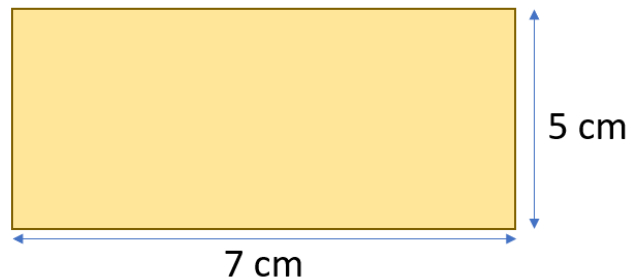
Find the perimeter and area of this rectangle.



The formula to find the perimeter of a rectangle is: _____

The formula to find the area of a rectangle is: _____

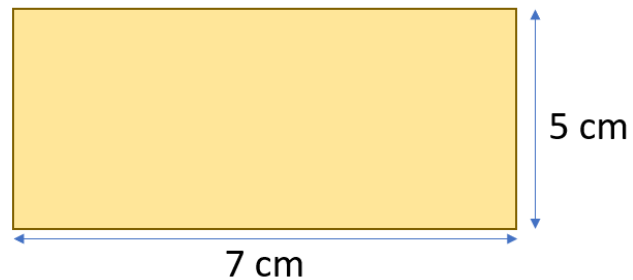
Find the perimeter and area of this rectangle.



The formula to find the perimeter of a rectangle is: _____

The formula to find the area of a rectangle is: _____

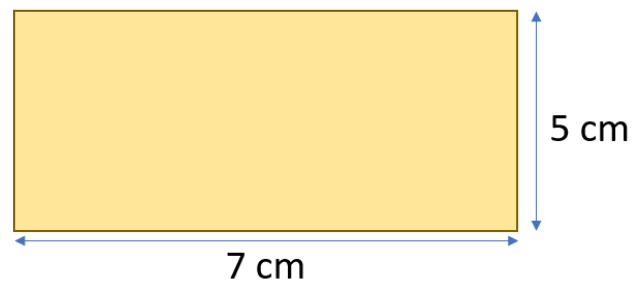
Find the perimeter and area of this rectangle.



The formula to find the perimeter of a rectangle is: _____

The formula to find the area of a rectangle is: _____

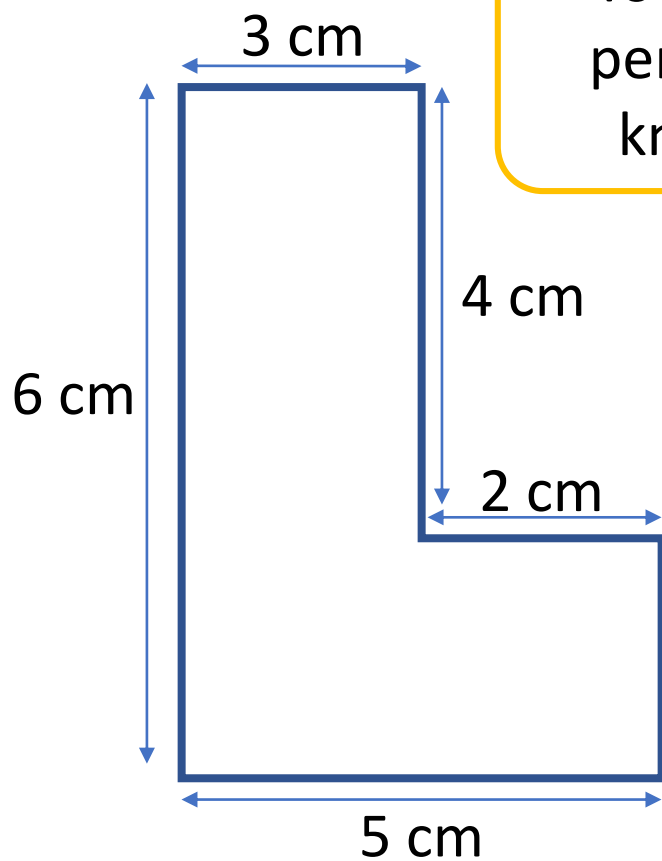
Find the perimeter and area of this rectangle.



The formula to find the perimeter of a rectangle is: _____

The formula to find the area of a rectangle is: _____

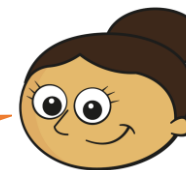
Thurs



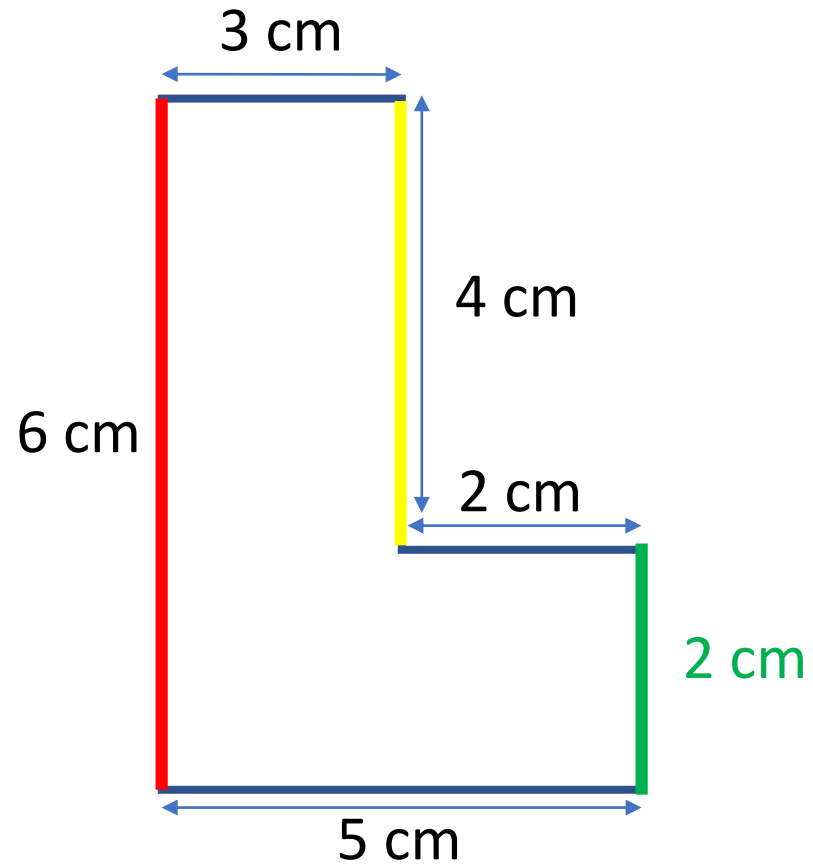
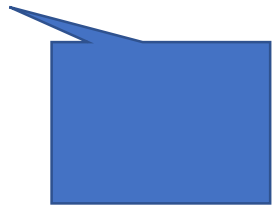
You can't work out the perimeter, you need to know all the lengths.



You can!



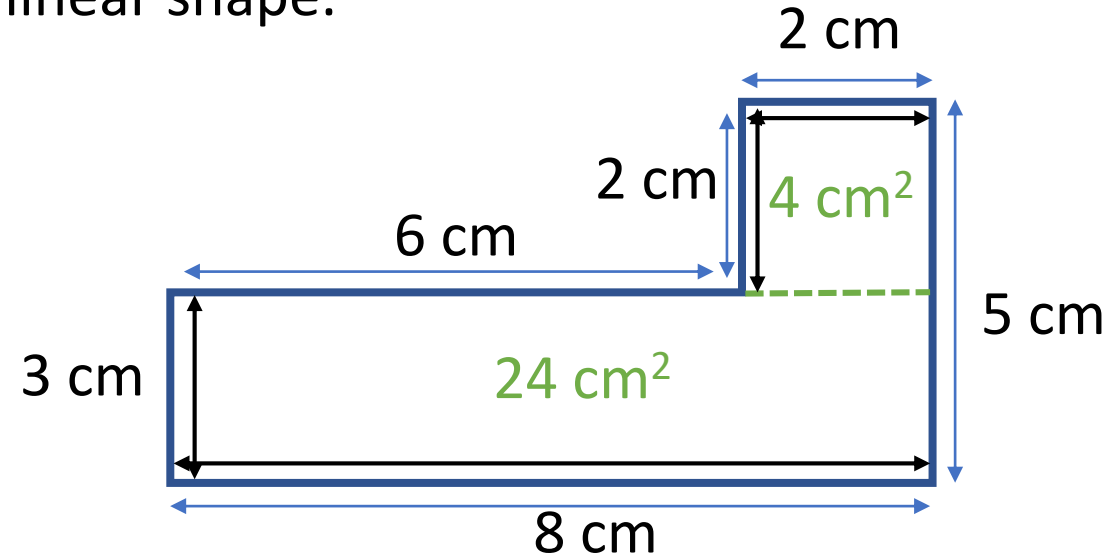
Have a think 



$$6 = 4 + ?$$

Perimeter = 22 cm

Find the area of this
rectilinear shape.



$$2 \text{ cm} \times 2 \text{ cm} = 4 \text{ cm}^2$$

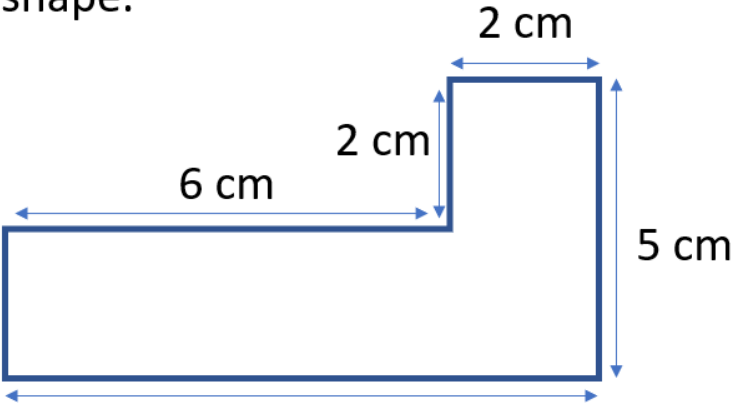
$$3 \text{ cm} \times 8 \text{ cm} = 24 \text{ cm}^2$$

$$4 \text{ cm}^2 + 24 \text{ cm}^2 = 28 \text{ cm}^2$$

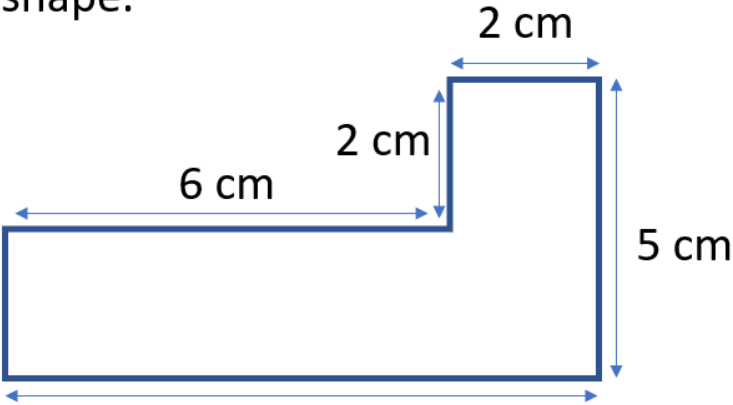
Have a think



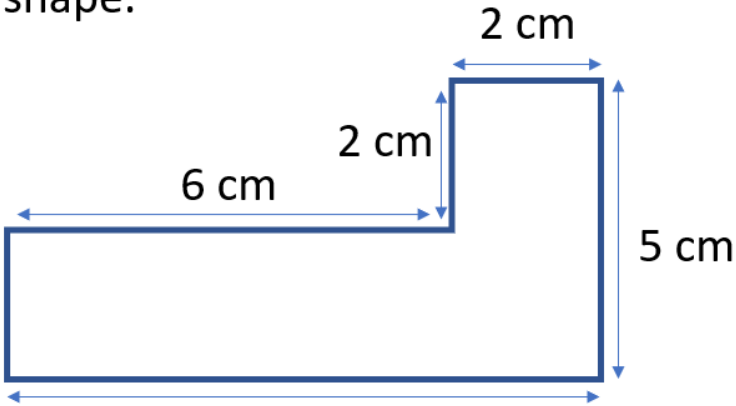
Find the area of this
rectilinear shape.



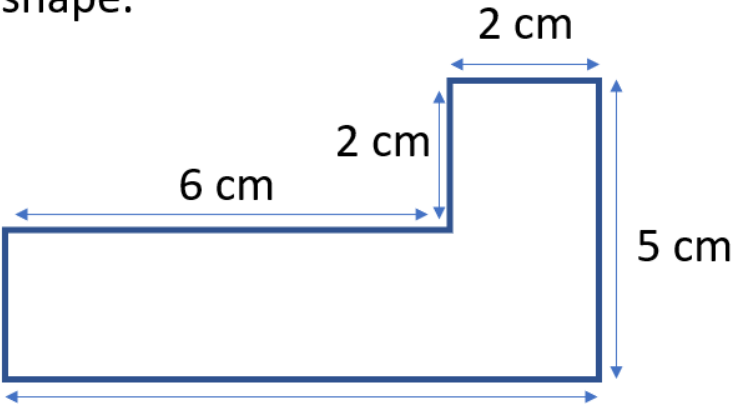
Find the area of this
rectilinear shape.



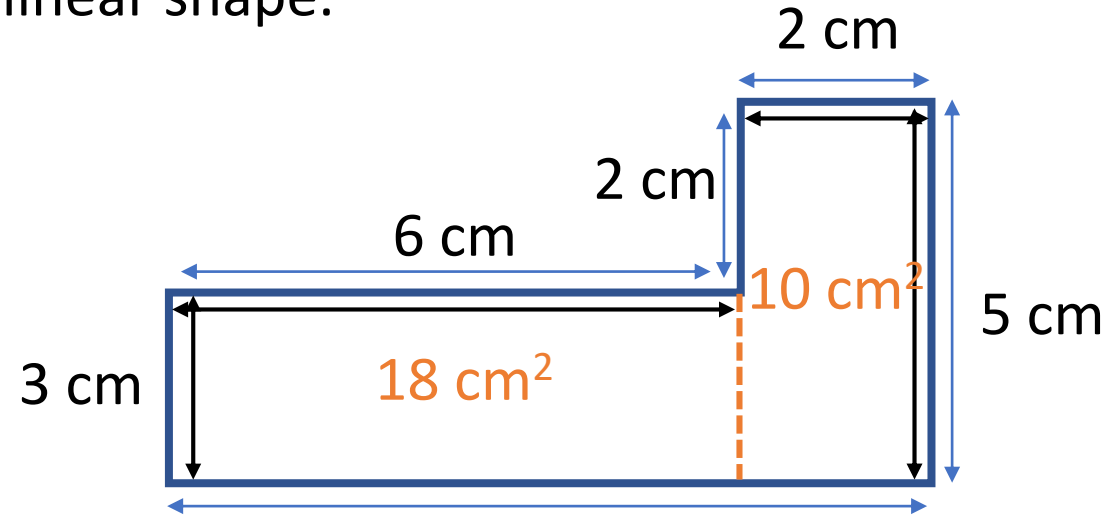
Find the area of this
rectilinear shape.



Find the area of this
rectilinear shape.



Find the area of this rectilinear shape.



$$2 \text{ cm} \times 2 \text{ cm} = 4 \text{ cm}^2$$

$$3 \text{ cm} \times 6 \text{ cm} = 18 \text{ cm}^2$$

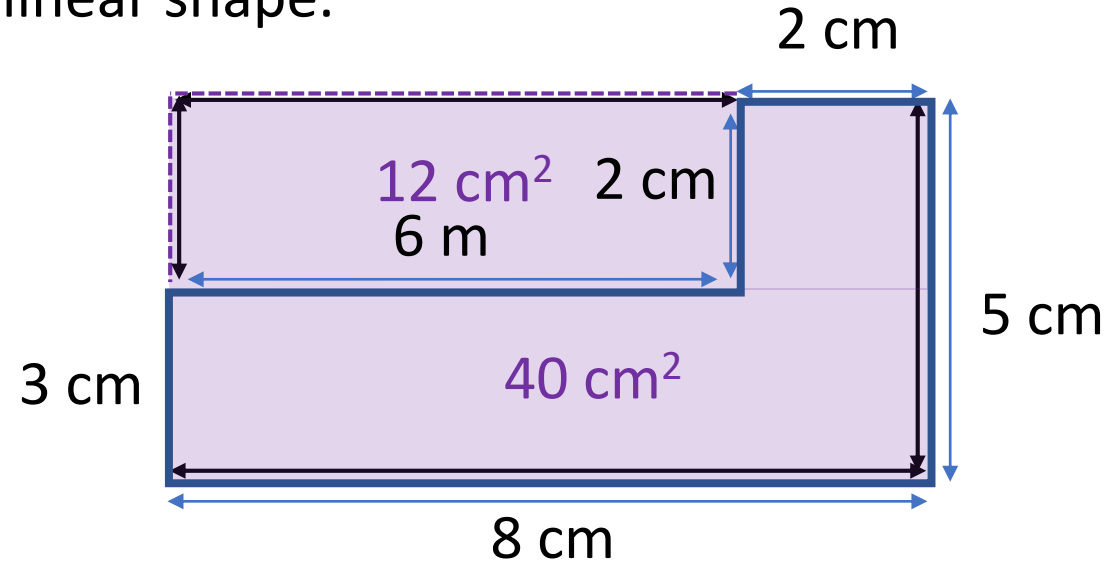
$$4 \text{ cm}^2 + 18 \text{ cm}^2 = 22 \text{ cm}^2$$

$$2 \text{ cm} \times 5 \text{ cm} = 10 \text{ cm}^2$$

$$10 \text{ cm}^2 + 18 \text{ cm}^2 = 28 \text{ cm}^2$$

$$10 \text{ cm}^2 + 18 \text{ cm}^2 = 28 \text{ cm}^2$$

Find the area of this
rectilinear shape.



$$8 \text{ cm} \times 5 \text{ cm} = 40 \text{ cm}^2$$

$$2 \text{ cm} \times 6 \text{ cm} = 12 \text{ cm}^2$$

$$40 \text{ cm}^2 - 12 \text{ cm}^2 = 28 \text{ cm}^2$$



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1

Use the cards to complete the sentences.

perimeter

cm^2

cm

m

area

m^2

inside

around

_____ is the amount of space _____

a two-dimensional shape. It can be measured in units such as

_____ or _____

_____ is the distance _____ a two-dimensional

shape. It can be measured in units such as _____ or _____

1

Use the cards to complete the sentences.

perimeter

 cm^2

cm

m

area

 m^2

inside

around

_____ is the amount of space _____

a two-dimensional shape. It can be measured in units such as

_____ or _____

_____ is the distance _____ a two-dimensional shape. It can be measured in units such as _____ or _____

1

Use the cards to complete the sentences.

perimeter

 cm^2

cm

m

area

 m^2

inside

around

_____ is the amount of space _____

a two-dimensional shape. It can be measured in units such as

_____ or _____

_____ is the distance _____ a two-dimensional shape. It can be measured in units such as _____ or _____

1

Use the cards to complete the sentences.

perimeter

 cm^2

cm

m

area

 m^2

inside

around

_____ is the amount of space _____

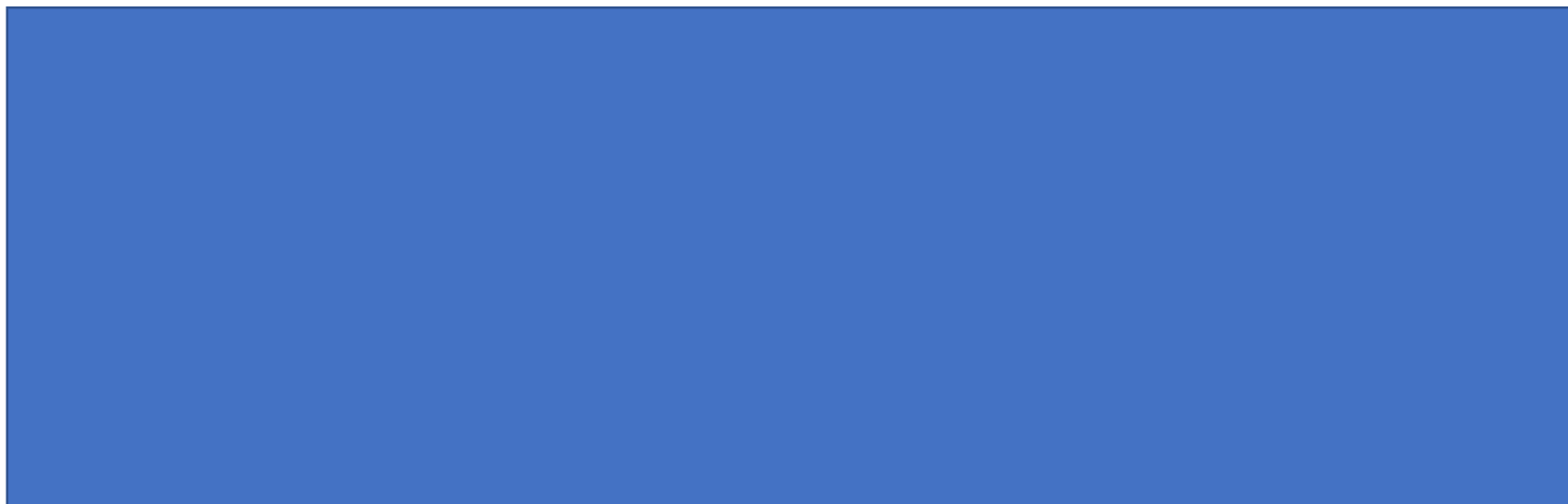
a two-dimensional shape. It can be measured in units such as

_____ or _____

_____ is the distance _____ a two-dimensional shape. It can be measured in units such as _____ or _____

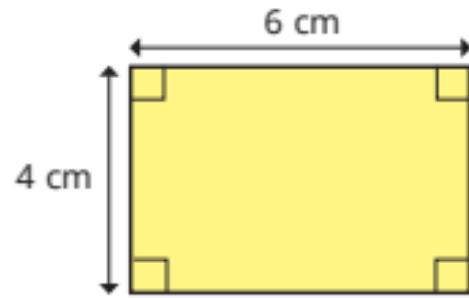


Your turn

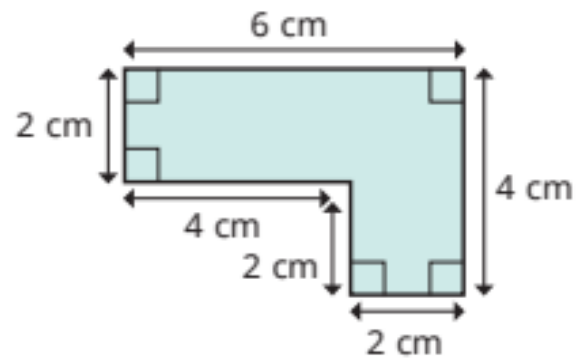


2 Work out the areas and perimeters of the shapes.

a)

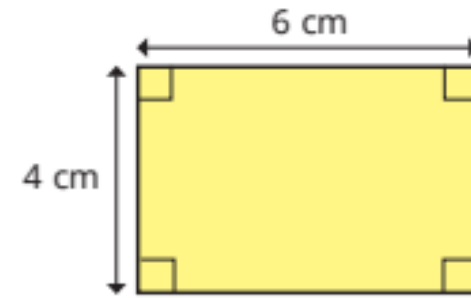


b)

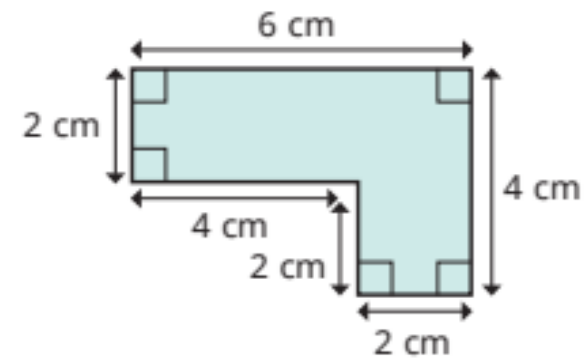


2 Work out the areas and perimeters of the shapes.

a)

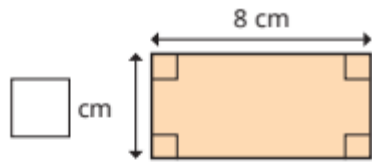


b)



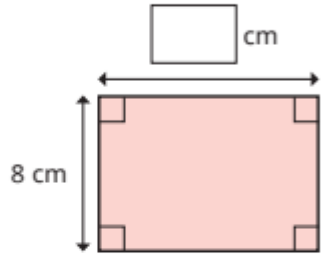
3 Work out the missing values.

a)



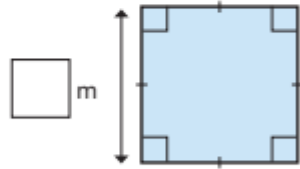
area = 32 cm²
perimeter = cm

b)



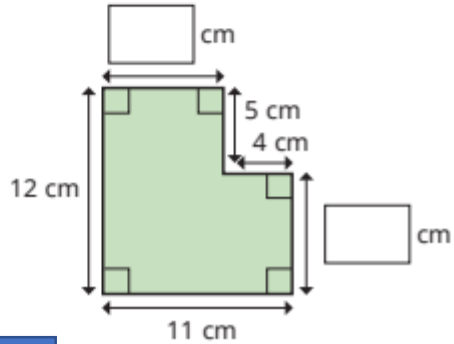
area = cm²
perimeter = 40 cm

c)



area = m²
perimeter = 36 m

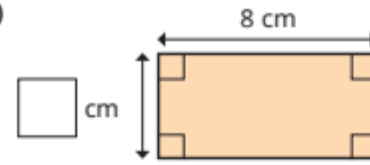
d)



area = cm²
perimeter = cm

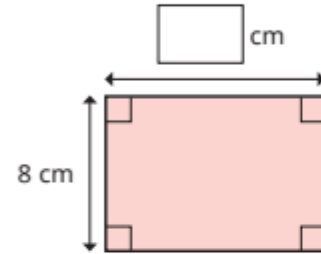
3 Work out the missing values.

a)



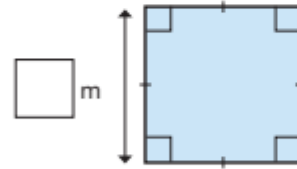
area = 32 cm²
perimeter = cm

b)



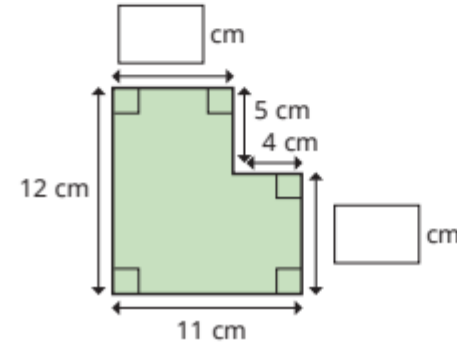
area = cm²
perimeter = 40 cm

c)

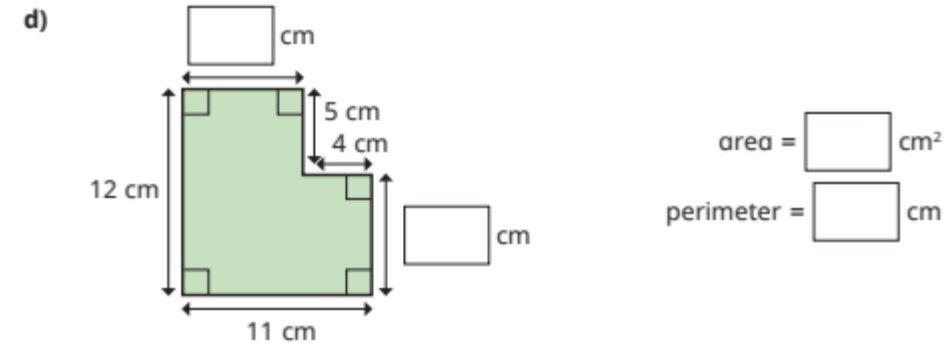
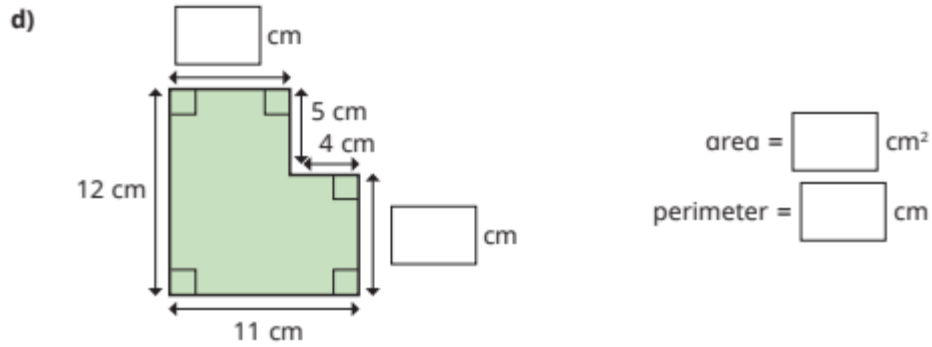
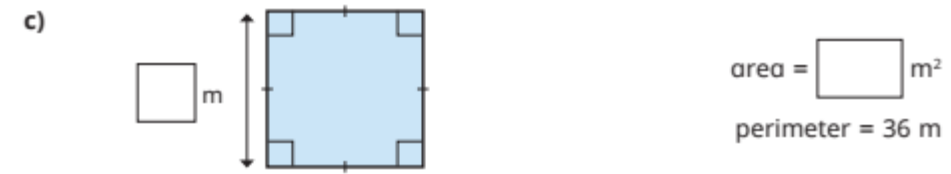
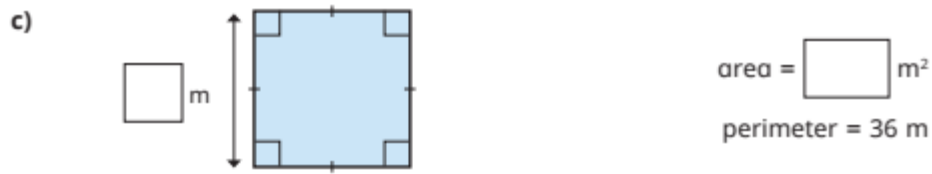


area = m²
perimeter = 36 m

d)



area = cm²
perimeter = cm



- 5 Draw two rectilinear shapes that have the same perimeter but a different area.
How did you do it?
Talk about it with a partner.

- 6 Two rectilinear shapes, A and B, each have an area of 12 cm²
- Shape A has the largest perimeter possible.
 - Shape B has the smallest perimeter possible.
- Draw shapes A and B.
What do you notice?

- 5 Draw two rectilinear shapes that have the same perimeter but a different area.
How did you do it?
Talk about it with a partner.

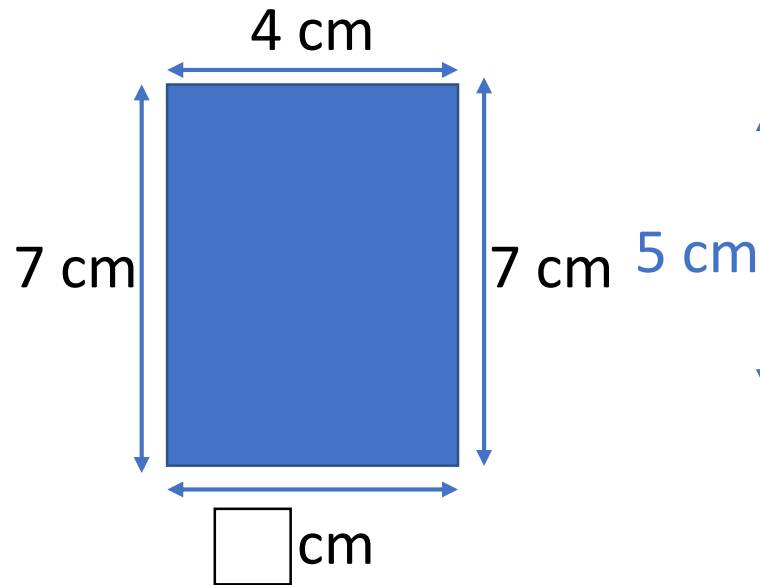
- 6 Two rectilinear shapes, A and B, each have an area of 12 cm²
- Shape A has the largest perimeter possible.
 - Shape B has the smallest perimeter possible.
- Draw shapes A and B.
What do you notice?

Hex
Oct
Thurs

Thurs

$$\text{Area} = 28 \text{ cm}^2$$

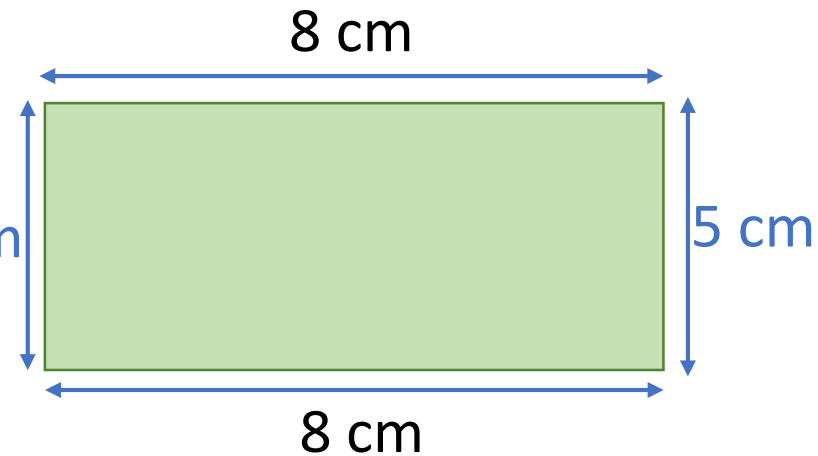
$$\text{Perimeter} = \boxed{}$$



$$7 \times \underline{4} = 28$$

$$\text{Area} = \boxed{}$$

$$\text{Perimeter} = 26 \text{ cm}$$



$$16 + 2w = 26$$

$$2w = 10$$

Have a think

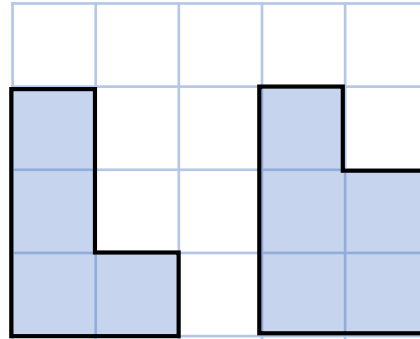


The formula to find the perimeter of a rectangle is $2l + 2w$

Each square represents 1 cm^2

Area = 4 cm^2

Perimeter = 10 cm

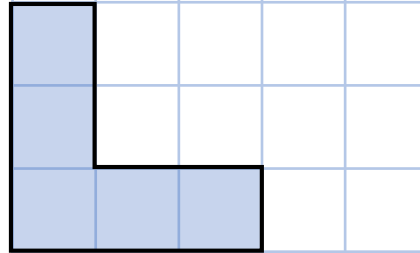


Area = 5 cm^2

Perimeter = 10 cm

Area = 5 cm^2

Perimeter = 12 cm



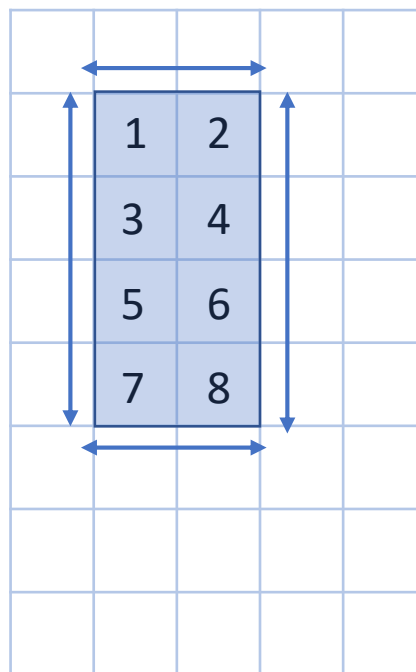
Have a think



If you increase the area, the perimeter will also increase.

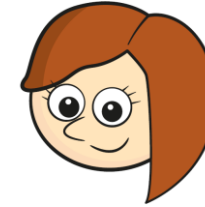
Tommy and Rosie are making a rectilinear shape with
an area of 8 cm^2

Mine has a perimeter of 12 cm

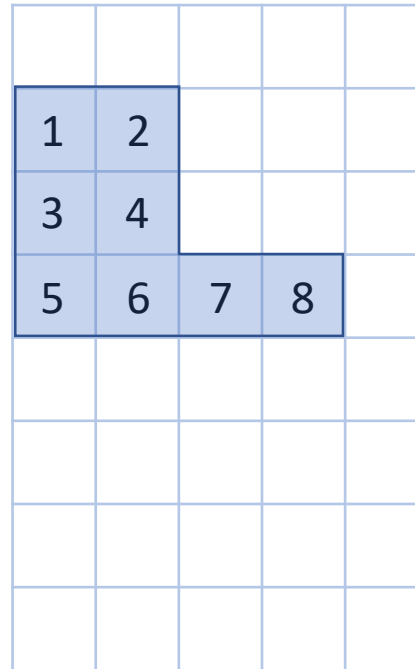


Tommy and Rosie are making a rectilinear shape with an area of 8 cm^2

I've made one with a greater perimeter!



Is there a rectilinear shape with an area of 8 cm^2 that has a greater perimeter than 14 cm?

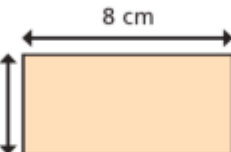
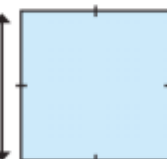
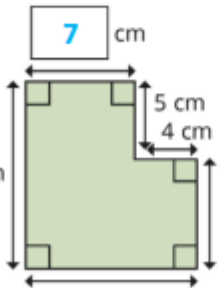


Perimeter = 14 cm

What do you notice?

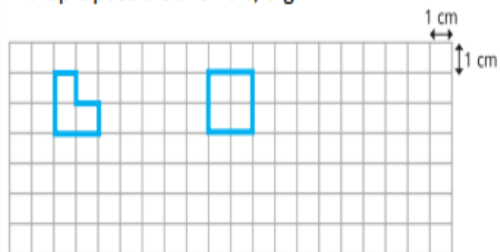
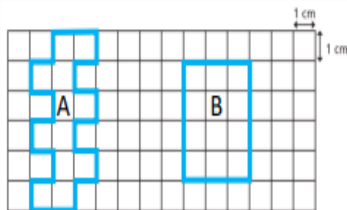
Have a think



1	Area is the amount of space inside a two-dimensional shape. It can be such as cm² or m² Perimeter is the distance around a two-dimensional shape. It can be such as cm or m.
2	a) perimeter = 20 cm area = 24 cm² b) perimeter = 20 cm area = 16 cm²
3	a) 4 cm  8 cm area = 32 cm² perimeter = 24 cm b) 12 cm  8 cm area = 96 cm² perimeter = 40 cm c) 9 m  area = 81 m² perimeter = 36 m d) 7 cm  12 cm 11 cm 5 cm 4 cm 7 cm area = 112 cm² perimeter = 46 cm

4	a) area = 30 cm² perimeter = 22 cm b) area = 29 cm² perimeter = 22 cm The shapes have the same perimeter but different area.
---	---

Y6 – Spring – Block 5 – Step 2 – Area and perimeter Answers (continued)

Question	Answer
5	multiple possible answers, e.g.  Draw a rectangle and then remove a square from the corner. The perimeter will stay the same, but the area will be smaller.
6	 The lengths of the sides of shape B are very close together.

Maths Meeting- Thurs



Time
problems

Converting from Larger Units to Smaller Units



1 minute = 60 seconds

1 hour = 60 minutes

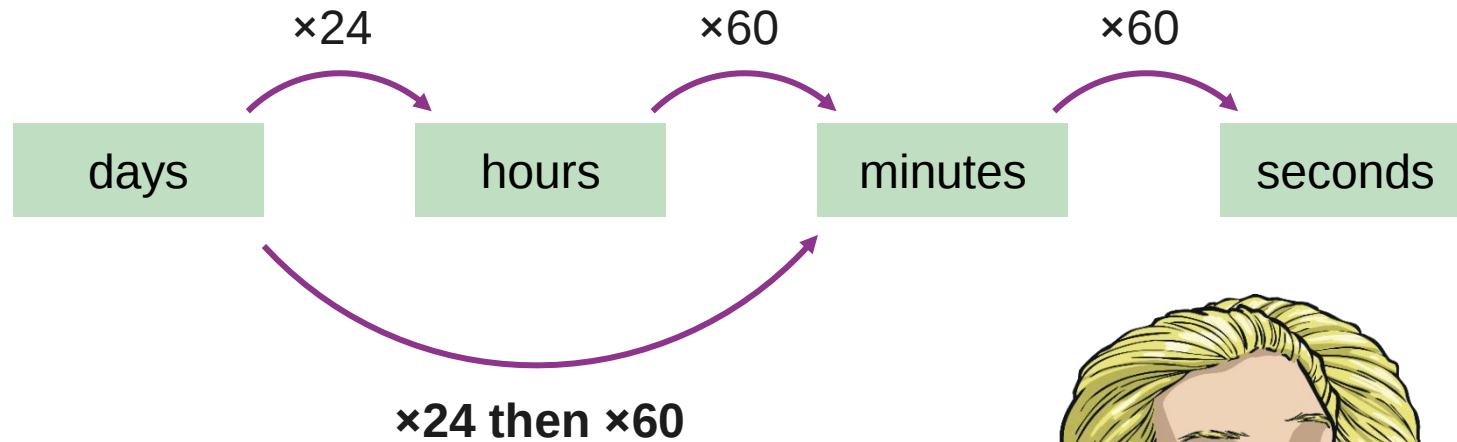
1 day = 24 hours

Convert the following:

7 minutes = **420** seconds

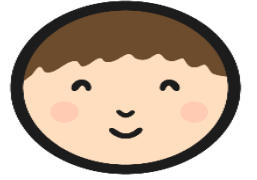
What do you notice about the number of seconds in 7 minutes and the number of minutes in 7 hours? Can you explain why this is?

More Than One Step Away

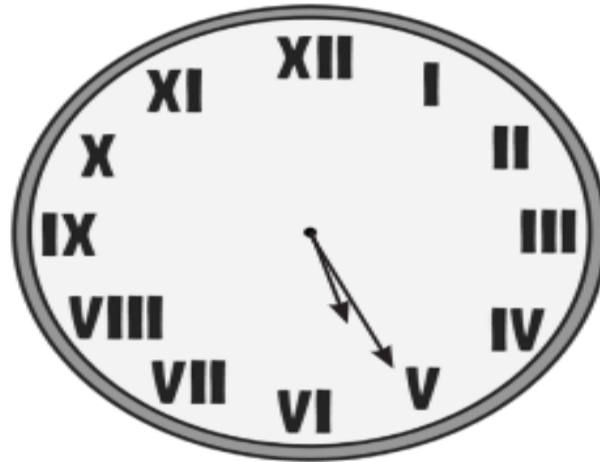
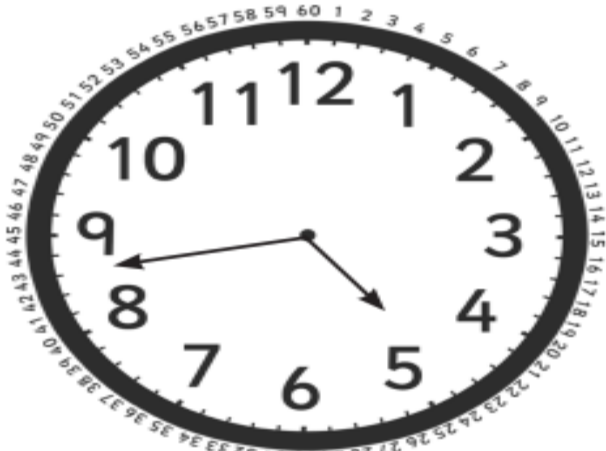


What would we need to do to convert days to minutes?





1. Here are 2 clocks. How much faster is the one on the right?



minutes

2. Stefan will be 10 on December 14th. His sister Marta was 6 on August 20th. What is the difference in ages between Stefan and Marta, giving the answer in years and months, to the nearest month?

3. In a 4 x 400m relay race, the times for each runner were 50.3 seconds, 49.2 seconds, 51.4 seconds and 49.1 seconds. What was the total time in which the team ran the race, in minutes and seconds?

minutes

seconds

question	answer	notes
1	43 minutes	Allow 42 - 44.
2	3 years 8 months	
3	3 minutes 20 seconds	
4	24 minutes	
5	6 hours 35 minutes	
6	25 days	do not count Oct 23 rd
7	16 minutes and 29 seconds	
8	13:07 or 1:07	
9	17:37 or 5:37	
10	1942	
11	4.49pm or 16:49	
12	53 seconds	
13	7 hours 37 minutes	
14	16 minutes	
15	20 seconds	time taken = 8125, $8125 \div 40 =$ 203.125 seconds/km, which is 20.3125 seconds/100m

