

Name: _____

HEROES TUITION

October Homework
Maths
Gold

Please return this booklet to you Maths teacher by the end of the month. All answers will be sent to your parents or guardians, so please ensure it is marked before handing it in.



Heroes Tuition Centre - Homework

Name: _____

Gold



1st October	
<p>Simplify $\frac{15}{45}$</p> <p><input type="text"/></p>	<p>$7.59 - 1.998$</p> <p><input type="text"/></p>
<p>Here are five letters on a scale</p> <p>Match each letter to one of the masses in the list</p>	<p>1410 g <input type="checkbox"/></p> <p>1.11 kg <input type="checkbox"/></p> <p>1.8 kg <input type="checkbox"/></p> <p>$1\frac{1}{4}$ kg <input type="checkbox"/></p> <p>1550 g <input type="checkbox"/></p>
<p>Three whole numbers add up to 40.</p> <p>Magnus says,</p> <p>"All three numbers must be even."</p> <p>Is Magnus correct?</p>	

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2nd October

$$\begin{array}{r} 67 \\ \times 44 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 34 \\ \hline \end{array}$$



Cheese
£1.10 per 100g

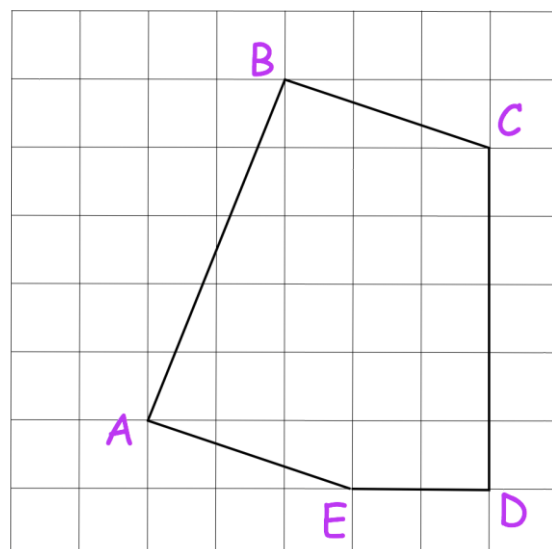
Work out the cost of 250g of cheese

Which two lines are **parallel**?

AB BC CD DE EA

Which two lines are **perpendicular**?

AB BC CD DE EA



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3rd October

$6 \overline{) 7044}$

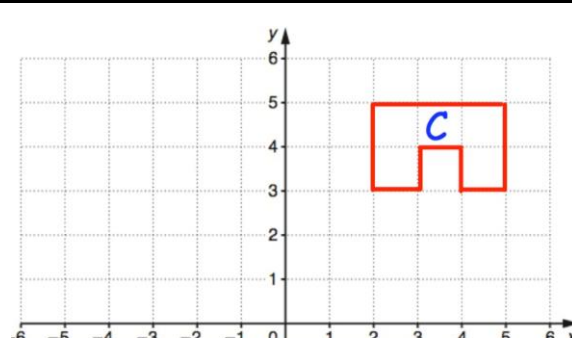
$\frac{1}{10} \times 8$

Three single-digit numbers multiply to make 448

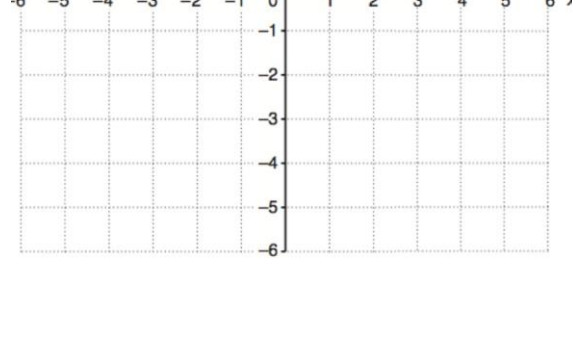
Write the missing numbers

\times \times = 448

Plot the point $(-4, -3)$



Reflect C in the y-axis



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4th October

50% of 170

45×21

A house is 10 metres wide and 7 metres tall.



Kirsty makes a scale model of the house.

Her model is 20 centimetres wide

How tall is her model?

How many centimetres are in 1.8 metres?

Draw a 125° angle

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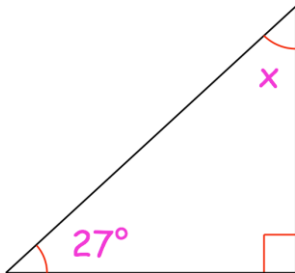
Gold



5th October

$$0.3 \div 10$$

$$2.76 + 1.451$$

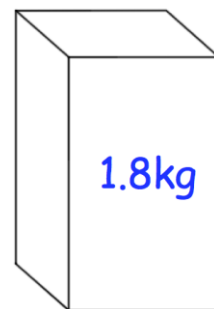


Calculate the size of angle x

A box contains 1.8kg of rice

Laura uses 45 grams of rice for each meal.
She uses all the rice.

How many meals did Laura make?



Hendrik has five coins.

Three of the coins add to £1.40

Three of the coins add up to £2.40

All five coins add up to £3.60

What are the coins that Hendrik has?

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Name: _____

6th October

25% of 364

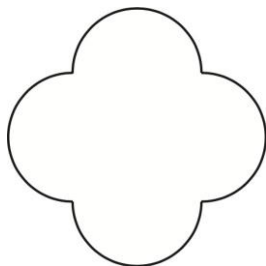
$$7 \overline{) 1498}$$

Three coffees and a flapjack cost £7.35.

The cost of the flapjack was 90p

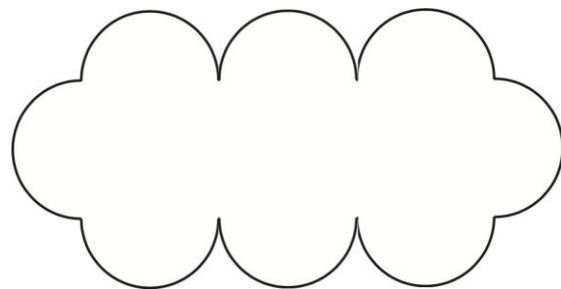
Work out the cost of four coffees.

This shape is made from four identical curves



The perimeter of the shape is 72 centimetres

A new shape is made out of curves of the same size



What is the perimeter of the new shape?

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Name: _____

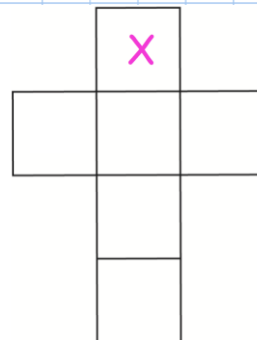
7th October

$$0.75 = \begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \square \\ \hline \square \\ \hline \end{array}$$

$$53 \times 18$$

Here is a net of a cube.

Draw one more cross so that the cube will have crosses on opposite faces



The population of London is 8,136,121

How many more people live in London than these four cities combined?

City	Population
Brighton	273,369
Preston	190,687
Birmingham	1,224,136
Telford	166,641

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Name: _____

8th October

$$13^2$$

$$3\frac{7}{12} = \frac{\square}{12}$$

Hannah says

"there are more prime numbers between 1 and 10 than between 10 and 20.

Is Hannah right?

Hannah has £700

She spends **15%** of her money on a new guitar.

How much does Hannah spend on her guitar?

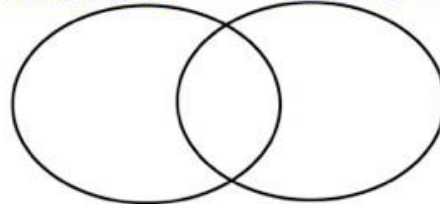


Write these numbers in the correct places on the diagram

1, 3, 5, 8, 10, 15, 25

Factors of 75

Factors of 50



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Name: _____

9th October

$$\frac{13}{4} = 3 \frac{\square}{4}$$

$$\begin{array}{r} 89206 \\ - 67317 \\ \hline \end{array}$$

$\frac{1}{2}$ of the cars in a car park are red

$\frac{1}{4}$ of the cars in the car park are blue

What fraction of the cars in the car park are red or blue?



The mass of a 2p coin is 7.1 grams.
The mass of a 1p coin is half the mass of a 2p coin.

What is the total mass of these eight coins?



Here is a number written in Roman numerals

CXXXV

Write the number in figures

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Name: _____

10th October

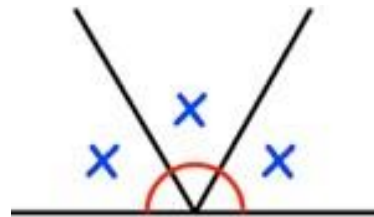
$$10^2$$

$$\frac{4}{5} - \frac{8}{15}$$

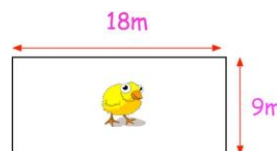
Josie has 1.2 kilograms of flour.
She uses 0.75 kilograms of flour to make a cake.
How much flour does she have left?



A straight line has been divided into 3 equal size angles.
Find the size of each angle



Mrs Jenkins is a chicken farmer
Her rectangular chicken pen is 18 metres long and 9 metres wide.
Each chicken needs at least 3m^2 of space.
How many chickens can she keep?



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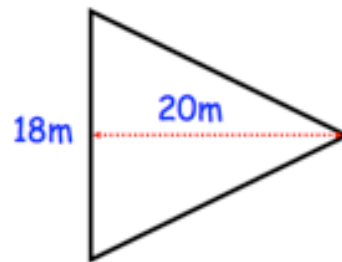
Name: _____

11th October

$$\begin{array}{r} 8 \quad 64 \\ \square = \frac{\quad}{72} \end{array}$$

$$\begin{array}{r} 5 \ 8 \ 0 \ 0 \ 2 \\ + \ 3 \ 1 \ 0 \ 1 \ 9 \\ \hline \end{array}$$

Work out the area of the triangle



20% of the children at a school are left handed.

There are 250 children at the school.

How many children are left handed?

Write three factors of 40 that are **not** factors of 36

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12th October

$$8.9 \times 100$$

$$\begin{array}{r} 39 \\ \times 34 \\ \hline \end{array}$$

Here is a list of numbers

8 11 14 16 25 27

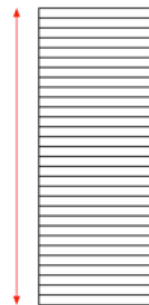
From the list, write down the cube numbers

Mr Smith makes a tower of 30 identical books.

Mr Smith adds nine more books.

How tall is the tower now?

270cm



Tick two numbers that are equivalent to $\frac{3}{5}$

35%

$\frac{30}{50}$

0.35

0.6

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Name: _____

13th October

75% of 20

$$\frac{6}{7} = \frac{18}{\square}$$

This week Harry spent $\frac{2}{3}$ of his pocket money on a ticket for a match.

He also spent $\frac{1}{5}$ of his pocket money on a scarf at the match.

What fraction of his pocket money has Harry spent?

Write the correct symbol in the box

>

=

<

2 - 3

20 - 30

Sarah has the same number of 2p coins as 5p coins.

Sarah has £2.10 in 2p coins.

How much money does Sarah have in total?

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Name: _____

14th October

$$\begin{array}{r} 93 \\ \times 74 \\ \hline \end{array}$$

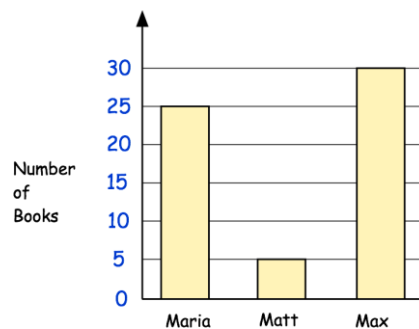
$$50^3$$

Over 20 days in February, it rained on 12 days.

What fraction of the days were rainy?
Simplify your answer.



Work out the mean number of books



Grapes cost £3.20 per kilogram
Blueberries cost £7 per kilogram

Work out the **total cost** of 250g of grapes
and 100g of blueberries

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Name: _____

15th October

Simplify $\frac{18}{22}$

$$-12 + 7$$

Match up the equivalent mixed numbers and improper fractions.

$$2\frac{1}{4}$$

$$2\frac{1}{3}$$

$$1\frac{3}{4}$$

$$3\frac{2}{3}$$

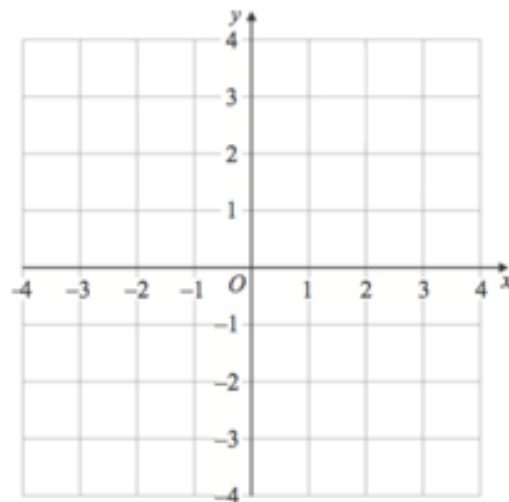
$$\frac{7}{4}$$

$$\frac{11}{3}$$

$$\frac{7}{3}$$

$$\frac{9}{4}$$

Plot the point A $(-1, 3)$



Plot the point B $(2, -1)$

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Name: _____

16th October

$$9 \overline{) 2376}$$

20% of 30

Change 780 metres into kilometres

Change 0.02 kilograms to grams

Circle all the prime numbers

5 7 15 17 25 27

A 2p coin has a mass of 7 grams.

Find the total mass of £8 of 2p coins.

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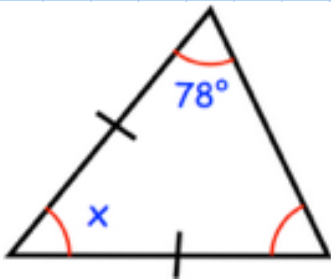


Name: _____

17th October

50% of 80

9 $\overline{) 711}$



Find the size of angle x.

Jessica has £600.

She gives 50% to her mother.

Jessica gives 10% to her brother.

She keeps the rest.

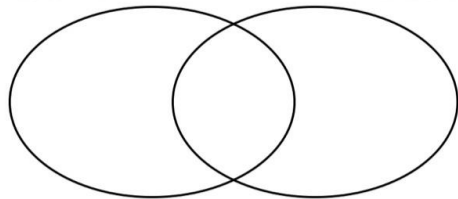
How much money does Jessica keep?

Write each number in the correct position on the diagram.

8 24 27 55 68

Even numbers

Cube numbers



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Name: _____

18th October

$$0.4 = \boxed{} \%$$

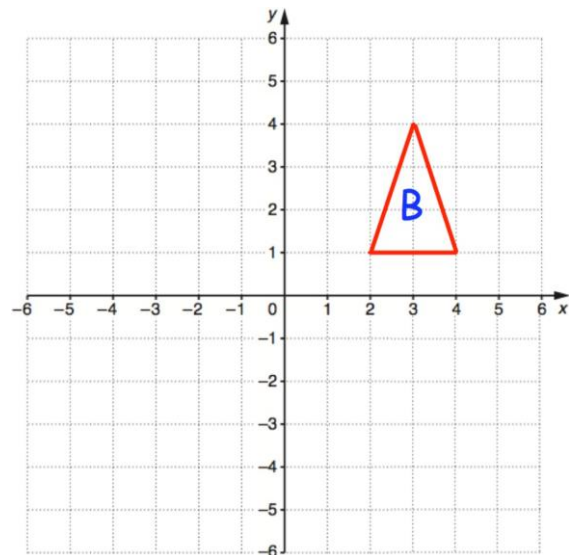
$$\boxed{} \%$$

$$\frac{9}{10} + \frac{1}{2}$$

$$\boxed{}$$

Write down **all** the common multiples of 4 and 9 that are less than 100.

Reflect triangle B in the x-axis



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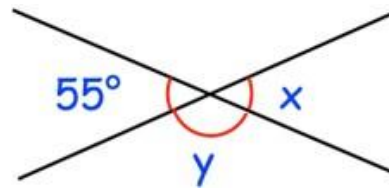
19th October

$$\begin{array}{r} 3 \quad 1 \\ - \quad 1 \\ \hline 8 \quad 4 \end{array}$$

$$8 \overline{) 936}$$

x =

y =



Write down 3 different fractions that are equivalent to $\frac{3}{5}$

Sophie has £2.12
Orla has 84p

How much money should Sophie give Orla
so that they have the same amount of
money?

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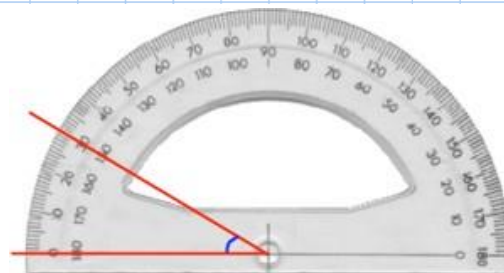
Name: _____

20th October

$$5 \times 5 \times 5 \times 5$$

$$1,032 \div 6$$

Write down the size of the angle being measured.



A group of 9 friends go on a coach tour.
The total cost of the tour is £648

How much does each person pay?



Magnus has five coins

Three of the coins add up to £1.40

Three of the coins add up to £2.40

All five coins add up to £3.60

What coins does Magnus have?

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Name: _____

21st October

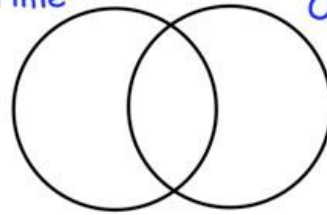
$$0.08 \times 10$$

$$2\frac{1}{2} = \frac{\square}{2}$$

Write each number in its correct place

1 2 6 5 11 15

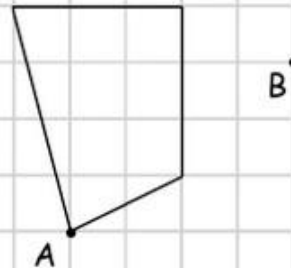
Prime Odd



Here is a quadrilateral on a grid.

The quadrilateral is translated so that point **A** moves to point **B**.

Draw the quadrilateral in its new position.



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Name: _____

22nd October

$$-30 - 55$$

$$\begin{array}{r} 68 \\ \times 24 \\ \hline \end{array}$$

Write these numbers in order, starting with the smallest.

0.304 0.41 0.088 2.1 0.9

Large pizzas cost £6.25 each
Small pizzas cost £4.80 each

Five children together buy two large pizzas and one small pizza.

They share the cost equally.

How much does each child pay?

Jack and Harry are waiters in a restaurant.
They are both paid the same amount of money for each hour they work.

Jack worked 5 hours and is paid £32

Harry worked 7 hours

How much is Harry paid?

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Name: _____

23rd October

75% of 600

9^2

Jon and Callum have the same number of coins.

Jon has £9.40 in 20p coins.

Callum has 50p coins.

How much money does Callum have?

Emily has four pots of crayons.

Three of the pots have 10 crayons and the other pot has 6 crayons.

What is the **mean** number of crayons in a pot?

Saffron costs £6.18 per gram.

What is the cost of a **tenth a kilogram** of saffron



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Name: _____

24th October

$$\begin{array}{r} 105 \\ \times \quad 11 \\ \hline \end{array}$$

$$\frac{1}{3} + \frac{2}{15}$$

List the first five prime numbers

An adult ticket for a football match is £9.00

A child ticket is 20% cheaper than an adult ticket.

How much is a child ticket?

In Victoria's class, there are 20 students

Explain why Victoria must be wrong

Exactly $\frac{2}{7}$ of the students in the class wear glasses.



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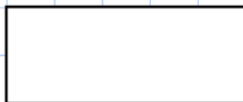
Gold



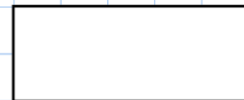
Name: _____

25th October

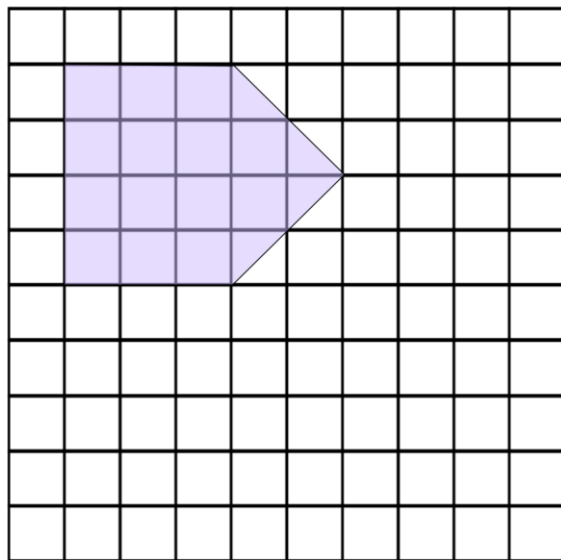
$$2^3$$



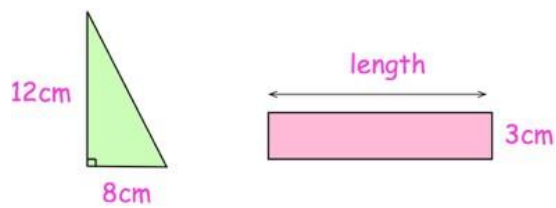
$$0.7 =$$



On the grid, draw a **square** which has the **same area** as the pentagon



Draw any lines of symmetry on the **pentagon** and the **square**



The triangle and rectangle have the same area

Work out the length of the rectangle.

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Name: _____

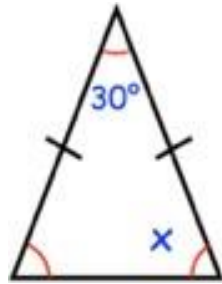
Gold



26th October

$$7 \overline{) 6692}$$

$$\frac{1}{4} =$$

 % %

Calculate the size of angle x

In a bag, there are green, white and blue counter.

$\frac{1}{10}$ of the counters are green.

$\frac{3}{5}$ of the counters are white.

What fraction of the counters are blue?

Write the number 315 in Roman numerals

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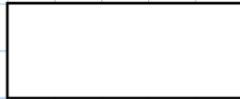
Gold



Name: _____

27th October

$$\begin{array}{r} 2 \quad 28 \\ \underline{11} = \end{array}$$



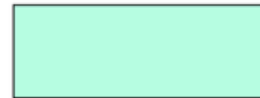
$$20 \overline{) 1080}$$



What is the perimeter of this rectangle?

5.7 cm

3.46 cm



Two of the fractions are equivalent

Circle the equivalent fractions.

$$\frac{2}{3} \quad \frac{12}{15} \quad \frac{9}{12} \quad \frac{16}{20} \quad \frac{6}{10}$$

Michael and Rosie each have a bottle of water.

Michael's bottle contains $1\frac{3}{4}$ litres

Rosie's bottle contains 2.2 litres.

How many more **millilitres** of water does Rosie have than Michael?

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Name: _____

28th October

Simplify $\frac{7}{28}$

$$\frac{2}{5} = \boxed{} \%$$

Write the correct symbol in each box to make the statements correct.



12×12

14×10

$80 \div 20$

$75 \div 25$

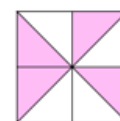
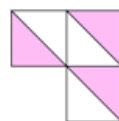
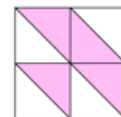
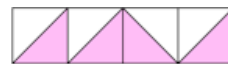
60×4

3×80

$120 \div 5$

5^2

Circle any pattern that has a line of symmetry



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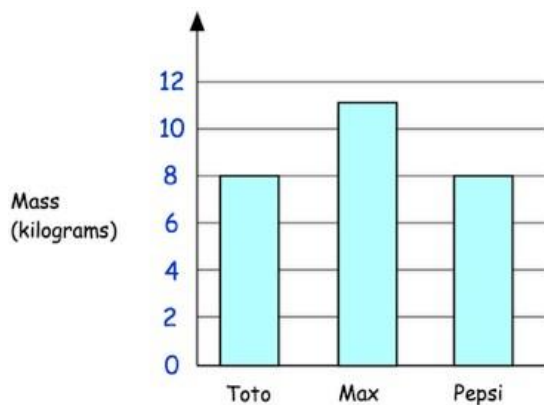
Name: _____

29th October

$$\begin{array}{r} 39 \\ \times 38 \\ \hline \end{array}$$

$$25 \times 8 \times 7$$

Work out the **sum** of 538,597 and 765,432



Work out 25% of Toto's mass.

Work out the mean mass of the puppies.

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Name: _____

30th October

$$14^2$$

$$\frac{1}{4} - \frac{3}{16}$$

Rhys buys 3 magazines.

The first magazine cost £4.99

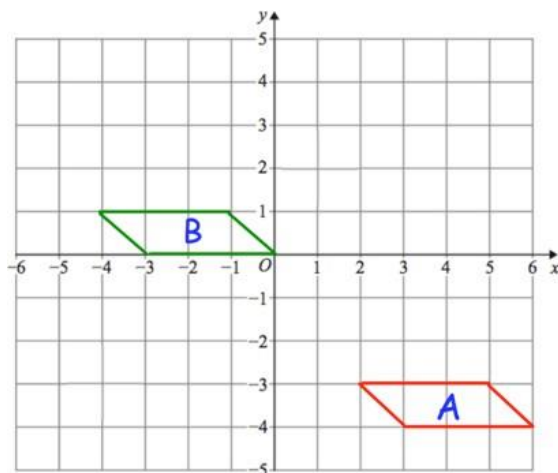
The second magazine cost £3.45

The third magazine cost £4.80

He pays with a £20 note.

Work out how much change Rhys should receive.

A parallelogram is translated from position A to position B



Complete the sentence

The parallelogram has moved

squares to the left

and

squares up

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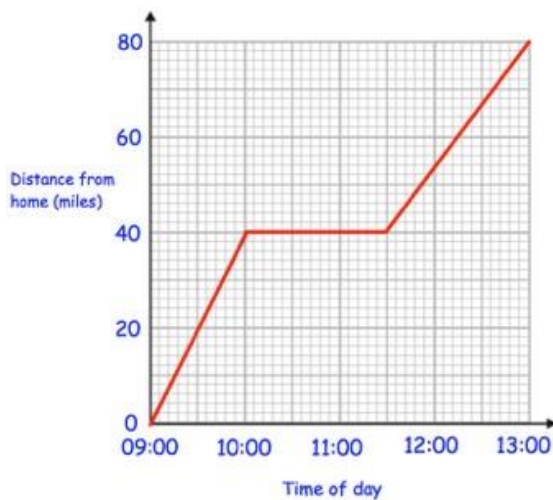


31st October

$$\begin{array}{r} 64 \\ \times 79 \\ \hline \end{array}$$

Simplify $\frac{6}{9}$

Natalie travels from her home to London.



She stopped and visited her friend Edward on the way.

How far was Natalie from home when she visited Edward?

How long did Natalie stop for?

Jack buys three pens.

He pays with a £20 note.
His change is £13.49

How much would two pens cost?