

Name: _____

HEROES TUITION

November Homework
Maths
Gold

**Please return this booklet to your 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: _____

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1st November

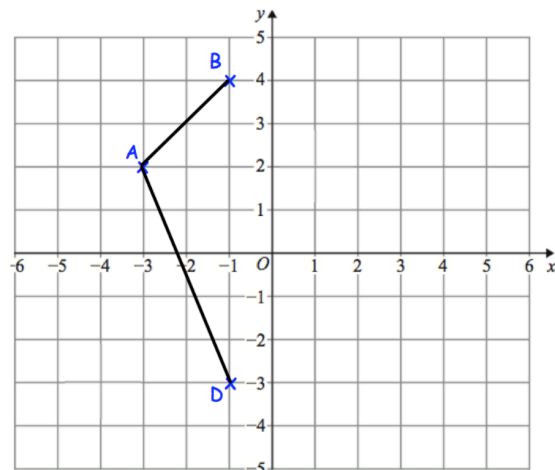
$$2,582 \times 1,000$$

$$50\% \text{ of } 9.2$$

A, B, C and D are the vertices of a kite.

Write the coordinates of point C.

How many lines of symmetry does the kite have?



Shannon writes down three different **factors of 36**

She adds her three numbers together.

The answer is greater than 30 but less than 35.

What three numbers could Shannon have written down?

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2nd November

Simplify $\frac{35}{50}$

6 | 7 2 7 8

Circle all the cube numbers

36 64 100
52 27 125
 81 300

A square measures 30cm by 30cm

A rectangle is 7cm longer and 2cm narrower than the square.

What is the difference in area between the two shapes?

Here is a number written in Roman numerals

DCCI

Write the number in figures

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3rd November

$$7 \overline{) 5887}$$

$$\frac{3}{5} + \frac{7}{10}$$

Ella and Caitlyn each start with different numbers.

Ella adds 8 to her number.

Caitlyn divided her number by 3.

Ella and Caitlyn both get the same answer.

What numbers could they have started with?

Ella

Caitlyn

Raisins cost 90p for 100 grams.

What is the cost of 450 grams of raisins?

Dried apricots cost £1.20 for 100 grams.

Leo pays £3 for a bag of dried apricots.

How many grams of dried apricots does he buy?

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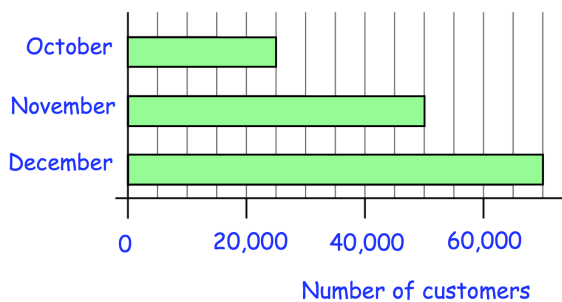


4th November

399
× 31

Simplify $\frac{12}{28}$

This chart shows the number of customers that a shop had in 3 months.



How many more customers did the shop have in December than October?

A different shop had **two million** customers in December.

Write **two million** in figures



Round the number on the calculator to the nearest ten

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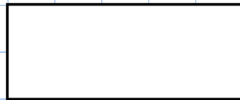
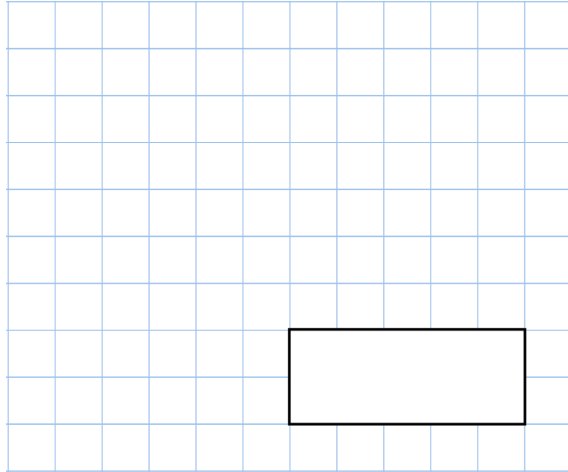
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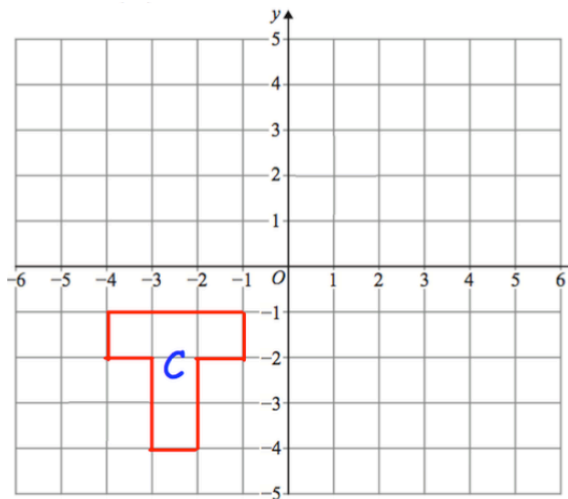
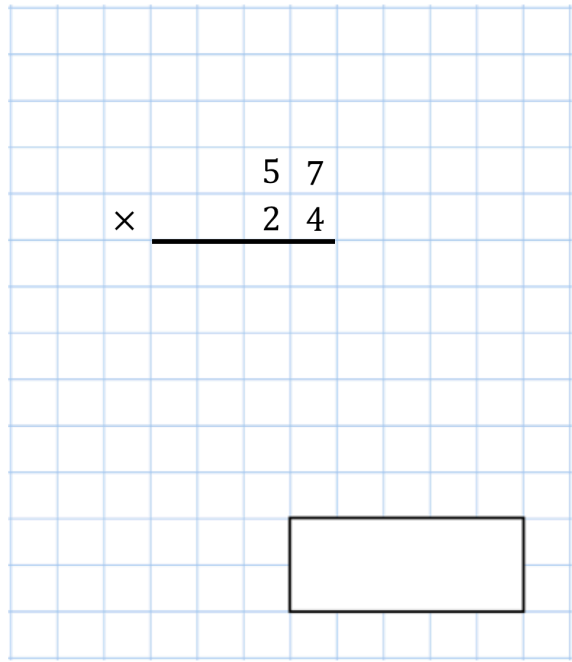


5th November

$$4 \times \frac{2}{15}$$



$$\begin{array}{r} 57 \\ \times 24 \\ \hline \end{array}$$



The shape C is translated 5 **right** and 1 **up**

Draw the shape in its new position

Plot the point $(-5, 2)$

Write the number 310 in Roman numerals



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6th November

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

Grid area for working out the percentage.

$$\boxed{}\%$$

$$\square^2 + 4^2 = 52$$

Grid area for solving the equation.

$$\boxed{}\%$$

List all the factors of 36

In each box, circle the number that is larger

$$\boxed{2\frac{1}{2} \quad 2.3}$$

$$\boxed{1\frac{1}{4} \quad 1.3}$$

$$\boxed{3\frac{4}{5} \quad 3.6}$$

$$\boxed{1\frac{11}{100} \quad 1.1}$$

Shaun plays in some basketball matches. He scores the points below in each match

15 19 20 11 5

Work out the mean number of points scored



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7th November

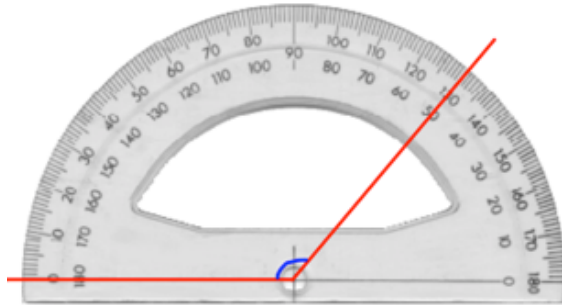
$$60.4 \div 10$$

A 20x10 grid with a rectangular box at the bottom right for the answer.

$$\frac{2}{3} - \frac{1}{6}$$

A 20x10 grid with a rectangular box at the bottom right for the answer.

Write down the size of the angle being measured



Arrange in order, starting with the smallest

$$\frac{2}{3}, \frac{11}{15}, \frac{7}{15}, \frac{3}{5}$$

Two different prime numbers have a total of 15. What are the two numbers?

	+		= 15
prime number		prime number	

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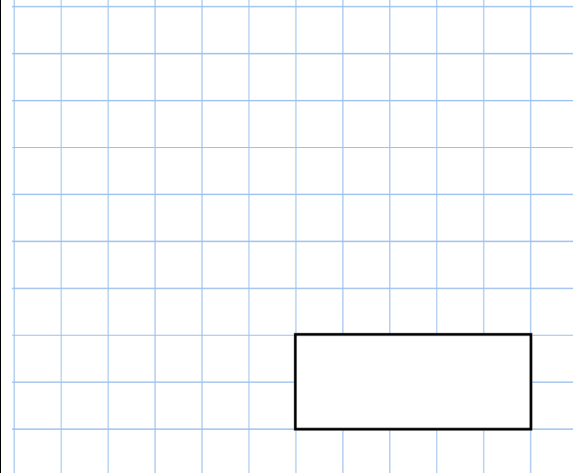
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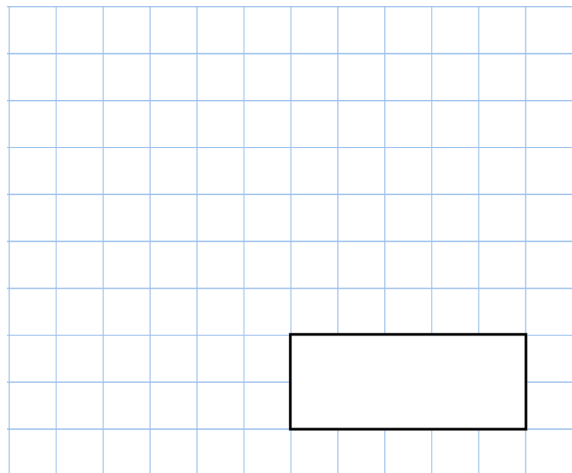


8th November

$$2.561 + 3.64$$



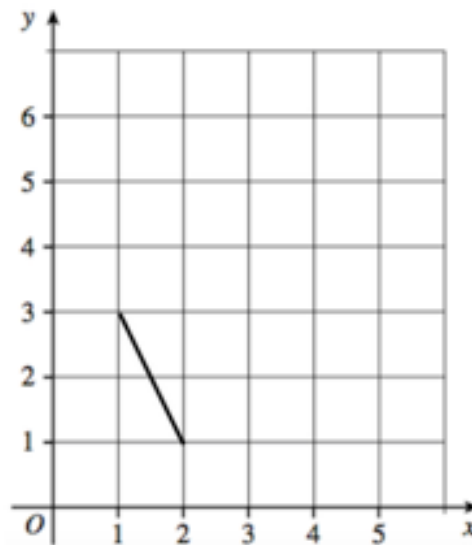
$$\frac{1}{2} - \frac{1}{8}$$



Here is one side of a square drawn on a coordinate grid.

The square has a vertex at (3, 4)

Draw the other three sides of the square on the grid



Four friends are in a race.
Alice is 4 metres ahead of Barry.
Ciara is 9 metres behind Dylan
Barry is 5 metres behind Dylan

Write the names of the runners in order, starting with the friend who is furthest ahead.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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furthest ahead

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9th November

25% of 36

$700 \div 1,000$

How many more people live in England than Scotland and Wales combined?

Country	Population
England	55,128,200
Scotland	5,408,923
Wales	3,113,674

In a quiz, each correct answer is worth 4 points and each wrong answer is worth -3 points.

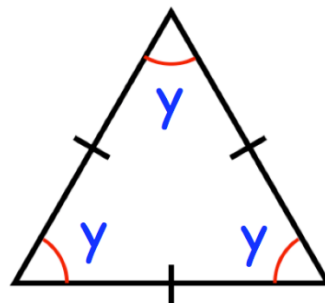
A team is asked 10 questions and they answered 3 correctly.

What is the team's final score?



Here is an equilateral triangle.

Find y



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10th November

$$75\% = \frac{\square}{\square}$$

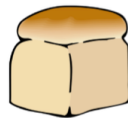
$$\frac{2}{3} = \frac{\square}{54}$$

Round 17,529 to the nearest 1,000

Karl is baking a loaf of bread and needs 0.5 kg of flour.

He has 40 grams of flour.

How much more flour does Karl need?
Give your answer in grams.



Work out the **difference** between the **sum** of 21 and 22 and the **product** of 21 and 22

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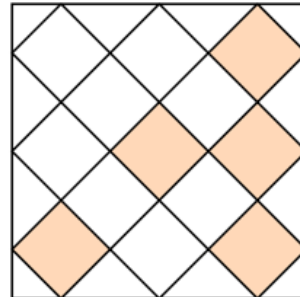


12th November

Simplify $\frac{15}{45}$

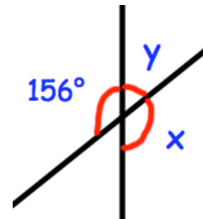
$$\begin{array}{r} 79 \\ \times 32 \\ \hline \end{array}$$

Shade one more square so this pattern has one line of symmetry



What size is angle x?

What size is angle y?



Here is a rule for the cost of a taxi

Cost = £5 plus an extra £1.50 for each mile

How much would a 7 mile journey cost?

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13th November

4 | 1 3 5 2

$$6\frac{3}{5} = \frac{\square}{5}$$

Draw a 160° angle

This graph can be used to change between miles and kilometres



Change 5 miles into kilometres

Change 10 miles into kilometres

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14th November

$$9^2 + 7^2$$

$$9 \overline{) 7272}$$

Jo has 80 sweets.

She gives 25% of the sweets to her friends.

How many sweets does Jo have left?

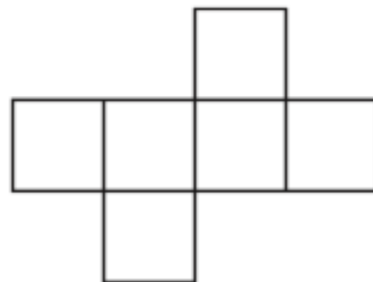


List the first 3 cube numbers

The numbers 1,2,3,4,5 and 6 are written on the faces of the cube.

The numbers on the opposite faces add up to 7.

Write the numbers on the net of the cube.



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16th November

		4 5
×		4 5

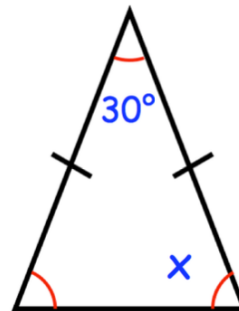
50% of 7

The first four terms in a sequence are

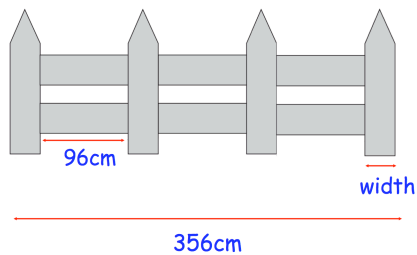
15 11 7 3

What is the eighth term?

Find x



A fence has four posts, equally spaced. Each space between the posts is 96cm. Work out the width of each post.



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17th November

$$\dots^3 = 64$$

$$\begin{array}{r} 234 \\ \times 47 \\ \hline \end{array}$$

Arrange these numbers in order, starting with the largest.

0.342 0.095 0.256 0.14 0.6 0.2

Bethany buys 5kg of flour.

She is making pizzas that each need 400g of flour.

What is the maximum number of pizzas that Bethany can make?



How much flour will Bethany have left?

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18th November

	4	9
×	9	2

$$\frac{15}{4} = 3 \frac{\boxed{}}{4}$$

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

How many more people live in Birmingham than the combined population of the other three cities?

Mr Jenkins is tiling a square floor.
He uses 144 square tiles.

Work out how many tiles are in each row.

Three numbers have a mean of 8.

All three numbers are different.

Write 3 possible numbers on the cards

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19th November

10^3

$\frac{1}{25} = \boxed{} \%$

Write these numbers in order, starting with the smallest.

7.23 2.7 7.226 7.3 2.37

Patterns are made from yellow and blue triangles.



Pattern 1



Pattern 2



Pattern 3

How many yellow triangles are there in Pattern 6?

How many blue triangles are there in Pattern 6?

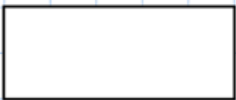
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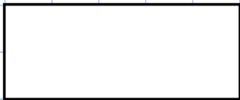
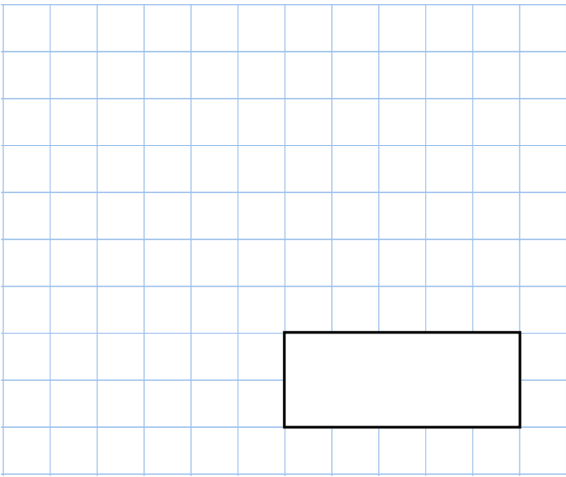
Name: _____

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20th November

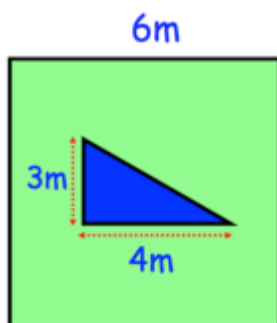
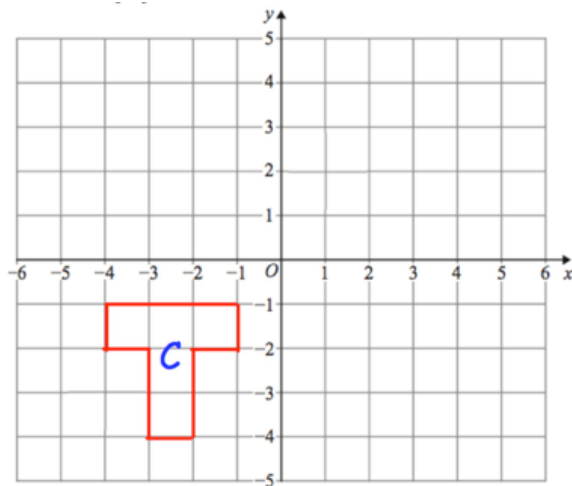
$$\begin{array}{r} 8\ 9\ 2\ 0\ 6 \\ -\ 6\ 7\ 3\ 1\ 7 \\ \hline \end{array}$$


$$\frac{7}{8} \times 2$$


Here is a shape drawn on a coordinate grid.

The shape is translated **1 left** and **5 up**.

Draw the shape in its new position.



Find the area of the garden that is grass.

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21st November

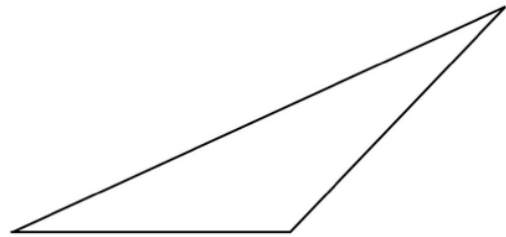
$$\frac{3}{\square} = \frac{21}{35}$$

$$21^2$$

Arrange in order, starting with the smallest.

$$\frac{13}{16}, \frac{3}{4}, \frac{5}{8}, \frac{11}{16}$$

Measure the size of the largest angle



Write **all** the numbers between 12 and 50 that are **factors** of 90

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22nd November

$$7 \div 100$$

$$\begin{array}{r} 46 \\ \times 37 \\ \hline \end{array}$$

Write the correct symbol in the box

>

=

<

75×12

30×40

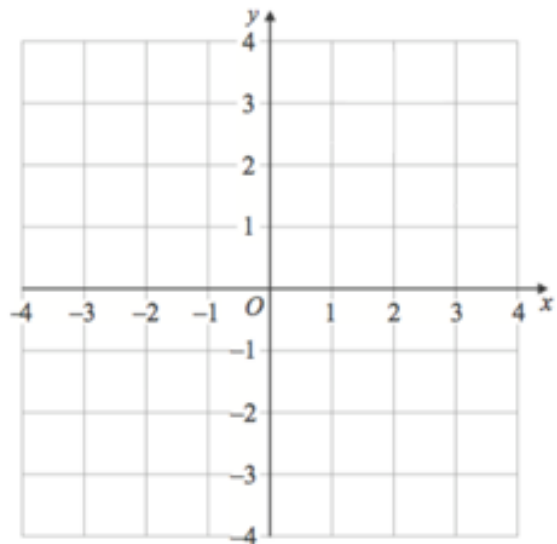
The vertices of a parallelogram have these coordinates.

$(-3, 2)$

$(-2, 0)$

$(3, 0)$

Complete the parallelogram



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23rd November

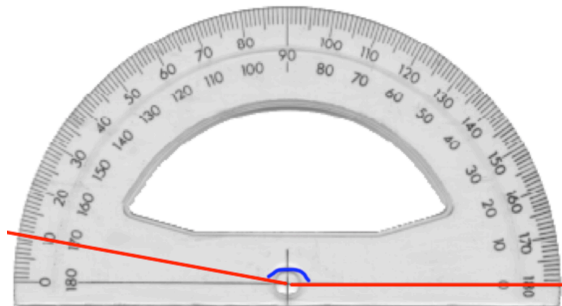
$$3^3$$

Grid for working out 3^3 . Includes a rectangular box for the answer.

$$\frac{3}{5} \text{ of } 8,015$$

Grid for working out $\frac{3}{5}$ of 8,015. Includes a rectangular box for the answer.

What size is the angle being measured?



George works in a cinema.

This table shows how much he is paid per hour

Day	Rate of Pay
Monday to Friday	£9 per hour
Weekend	£13 per hour

Last week George worked 32 hours in total.
He worked 19 of the hours during the week.

How much was George paid in total?

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Name: _____

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24th November

$$\begin{array}{r} 97 \\ \times 91 \\ \hline \end{array}$$

$$\frac{9}{10} - \frac{2}{5}$$

Write three factors of 36 that are **not** factors of 24

A box of staples contains 1,000 staples.

A secretary wants to order 300,000 staples.

How many boxes of staples should they order?

Find the mean of these numbers

17 18 25 32 43

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Name: _____

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26th November

$$\frac{1}{5} = \boxed{} \%$$

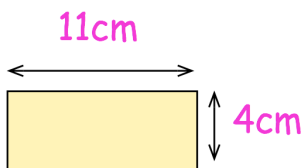
$\boxed{} \%$

$$\frac{11}{12} - \frac{5}{6}$$

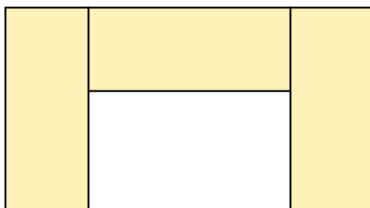
$\boxed{}$

Write down the first 12 square numbers

Zara has some identical rectangles.



She makes this shape using three of the rectangles



What is the perimeter of Zara's shape?

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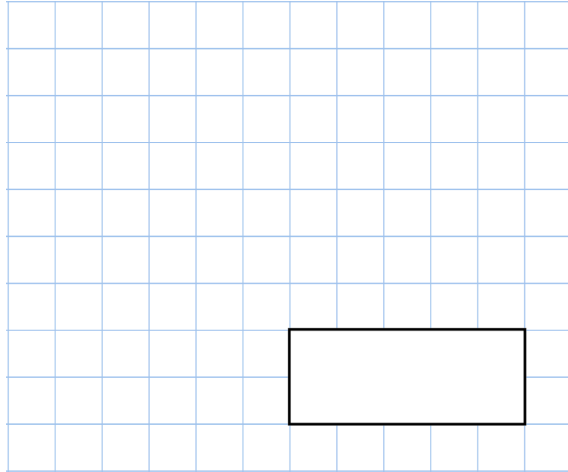
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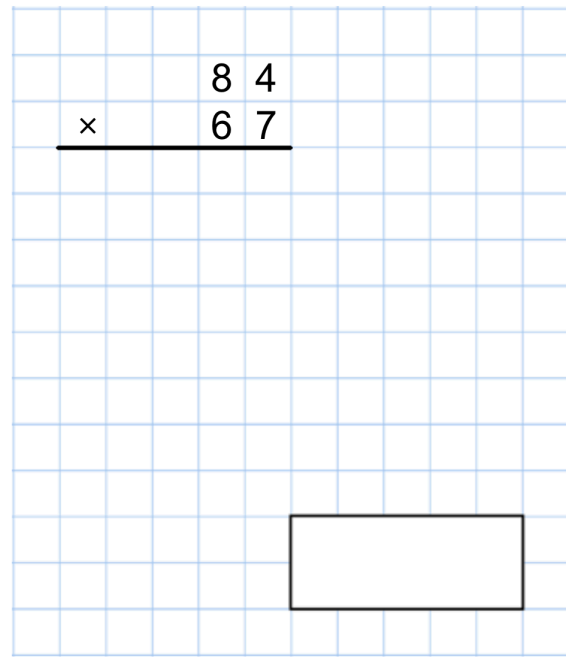


27th November

$$3,460 \div 100$$



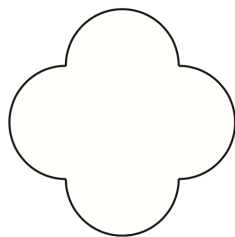
$$\begin{array}{r} 84 \\ \times 67 \\ \hline \end{array}$$



Write these numbers in order, starting with the smallest.

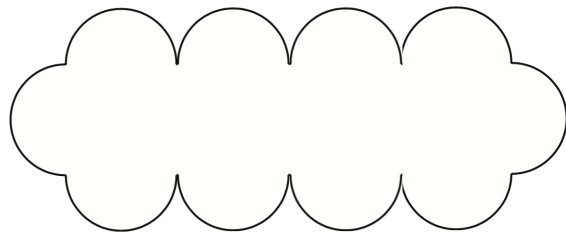
9.21 1.9 9.119 9.2 1.29

This shape is made from four identical curves



The perimeter of the shape is
24 centimetres

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



What is the perimeter of the new shape?

Heroes Tuition Centre - Homework

Name: _____

Gold



28th November

6 | 1 4 5 8

--	--	--	--	--	--

$$4\frac{2}{5} = \frac{\square}{5}$$

--	--	--	--	--	--

Here are 6 tiles

9	7
4	1

8	9
3	8

7	0
2	5

8	4
3	7

5	2
4	8

9	7
1	6

The tiles are placed on the grid below so that the column and row totals add up to the numbers shown.

The two shaded tiles have been placed on the grid for you. Place the other four tiles onto the grid.

						total
				9	7	30
				4	1	24
8	9					45
3	8					28
total	20	27	20	16	23	21

Michael and Rosie each have a bottle of water.

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

Rosie's bottle contains 1.2 litres

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

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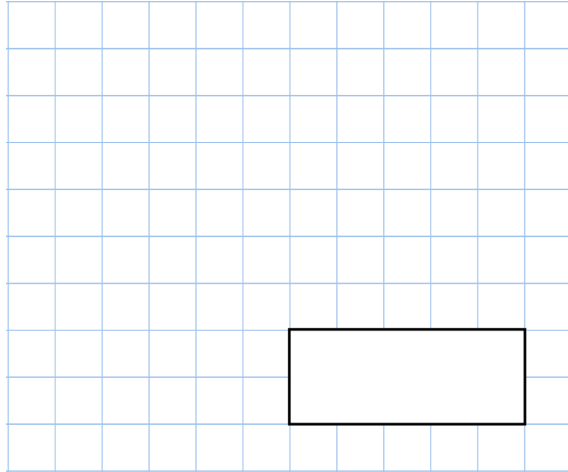
Name: _____

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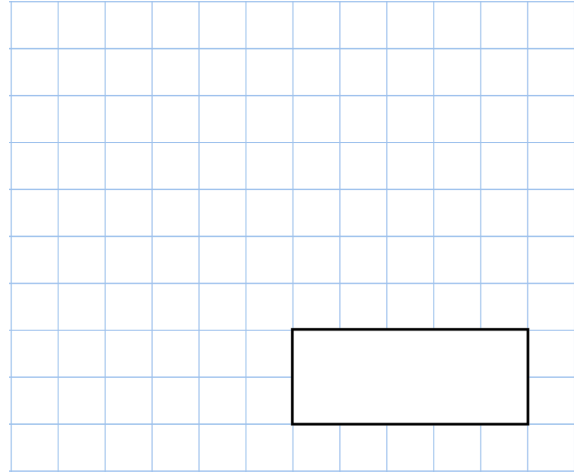


29th November

25% of 1,200



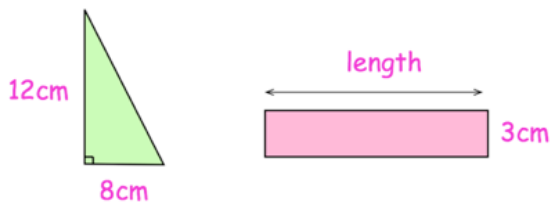
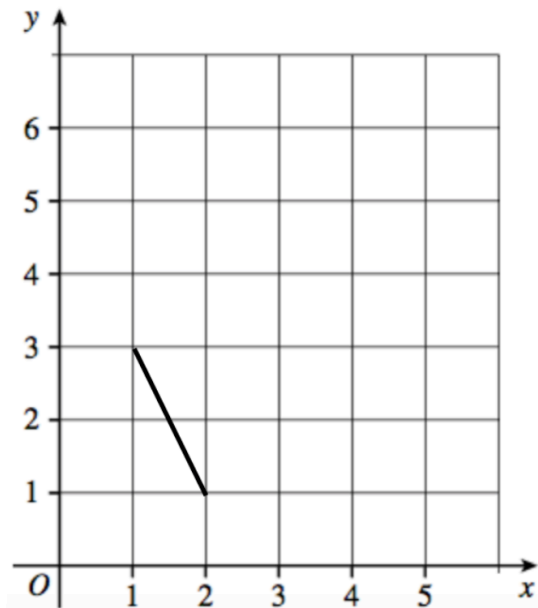
$$\frac{1}{6} + \frac{2}{3}$$



Here is one side of a square drawn on a coordinates grid.

The square has a vertex (3, 4).

Draw the other three sides of the square on the grid



The triangle and rectangle have an equal area.

Work out the length of the rectangle

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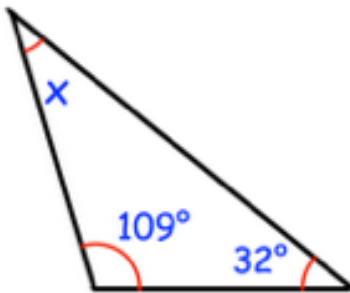
Gold



30th November

$$\begin{array}{r} 88 \\ \times 77 \\ \hline \end{array}$$

$$0.15 \times 1,000$$



Calculate the size of angle x

A box contains 3.4kg of rice

Laura uses 85 grams of rice for each meal.
She uses all the rice.

How many meals did Laura make?



Matt asked 35 people to see how they travelled to work.

Matt says, "exactly 10% of the people in the survey said they travelled by train."

Explain why Matt is **wrong**