



Given that $14.5 \times 34 = 493$

Write down the value of

$$14.5 \times 17$$

Write down the value of

$$49.3 \div 14.5$$

Write $\frac{11}{2}$ as a mixed number

A bus leaves Derby Bus Station every 10 minutes.

A train leaves Derby Train Station every 16 minutes.

At 9am a bus and a train leave the stations at the same time.

When is the next time that a bus and train leave at the same time?

Find the n th term of

2, 11, 20, 29,

Kelly buys a 2 week holiday to California in March for £1800.

Jenny buys a 2 week holiday to California in July for \$4219.60

Given £1 = \$1.54

Find how much more Jenny pays for her holiday.



Nathan buys y apples at 15 pence each.

Write an expression for the total cost in terms of y .

Solve $4w = 20$

Solve $3y + 2 = 17$



The perimeter of this parallelogram is 50cm

The length of each short side is 7.5cm. Calculate the length of each long side.

The two-way table shows the grades students in Year 10 received in their exams.

How many students are in Year 10?

		Physics			
		A	B	C	D
Maths	A	7	6	1	1
	B	3	5	3	0
	C	4	2	6	3
	D	0	0	1	0

How many students got the same grade in maths and physics?



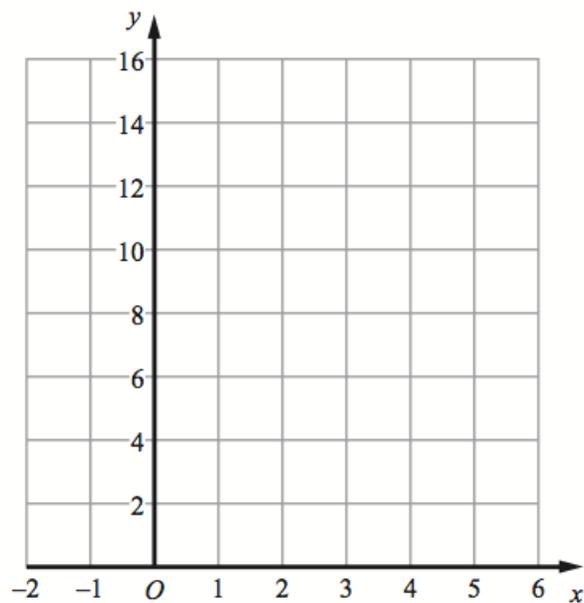
Victoria is travelling North-East.

Write her direction of travel as a three figure bearing.

Write 40.5% as a fraction
Give your answer in its simplest form.

On the grid, draw $y = 7$

On the grid draw the graph of $y = 10 - 2x$ for the values of x from -1 to 5 .



A map has a scale of 1cm represents 2km.

Write this scale as a ratio in its simplest form.

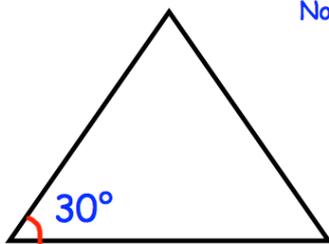


Solve $y - 3 = 9$

Write down the next two terms in this sequence

1 5 9 13

Is 200 a term in this sequence?
Explain your answer.



Not drawn accurately

Shown is an isosceles triangle.

Work out the possible sizes of the other two angles.

Give two different possible pairs

30° and _____ and _____

30° and _____ and _____

Work out the mean number of phones owned

Number of phones	Frequency
0	1
1	3
2	2
3	0
4	4
5	0



A standard box of cereal contains 480g of cereal.

A smaller box contains $\frac{1}{3}$ less cereal.

How much cereal does the smaller box contain?

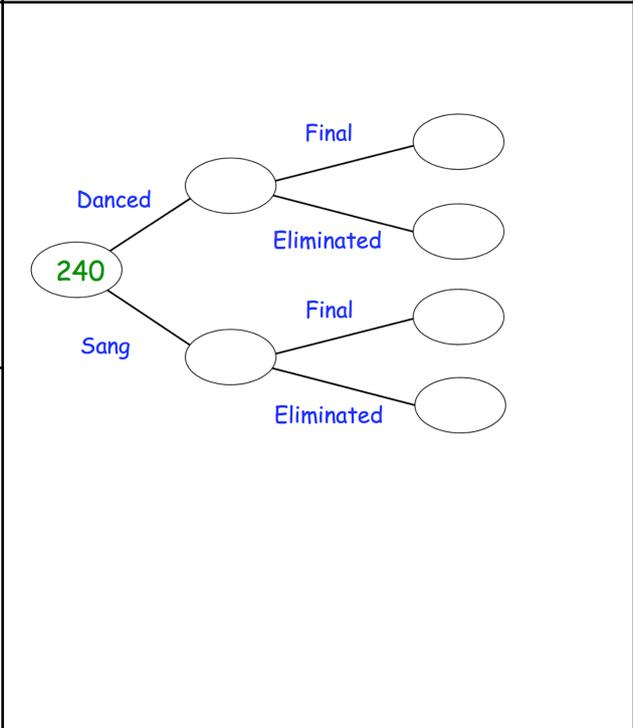
240 acts took part in a talent show.

25% of the acts danced and the rest sang.

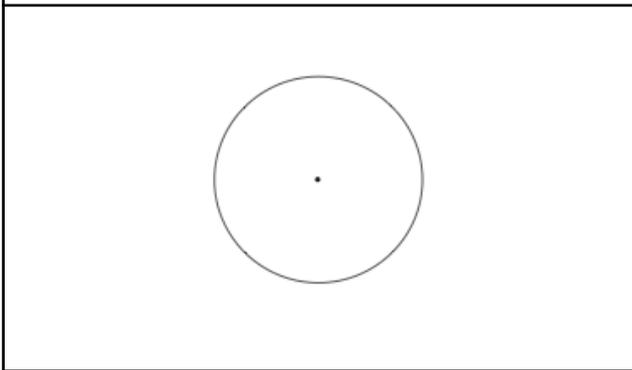
40 acts made it through to the final.

29 of the acts that sang made it to the final.

Complete the frequency tree.



What fraction of the acts made it through to the final?



Draw a tangent to the circle

Leo runs 2 kilometres in 2 minutes.

Calculate his average speed.

Give your answer in m/s



Mr and Mrs Jones have two children.
One of their children is 13 years old.
The range of their ages is 8 years.

What are the possible ages of the other child?

A blue light flashes every 6 seconds.
A green light flashes every 4 seconds.

They have both just flashed at the same time.

After how many seconds will they both flash at the same time?

Round 45.5247 to 2 decimal places

A car travels 105 miles in 150 minutes.

Calculate the speed of the car.

The probability of a student at Mayfield High being left handed is 0.12

1300 pupils go to Mayfield High.

How many pupils at Mayfield High are left handed?



-3×5

-8×-2

Work out $\frac{1}{8}$ of 28

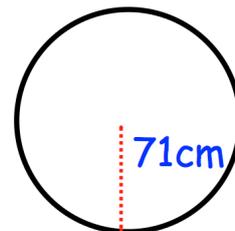
Simplify

$8y - 2y$

Simplify

$6w + 3y + 4w + y$

Calculate the circumference



Write an equation with 11 as its solution.

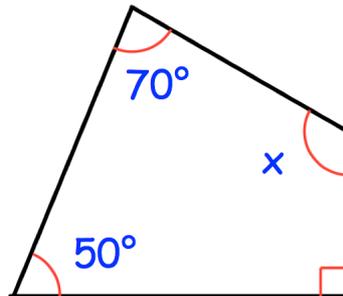


Work out 12^4

0.16 14% $\frac{3}{20}$ 0.2 9%

Write these numbers in order of size.
Start with the smallest number.

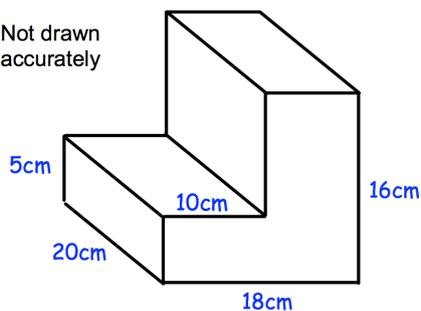
Find x



$\frac{4}{5}$ of y is 20.

Find the size of y.

Not drawn accurately



Calculate the volume



A piece of wire 45cm long is cut into six equal pieces.

What is the length of each piece?

Simplify $9 \times c \times d \times 4$

Rosie has 12 counters.

Bethan has 3 bags of counters.
There are 50 counters in each bag.

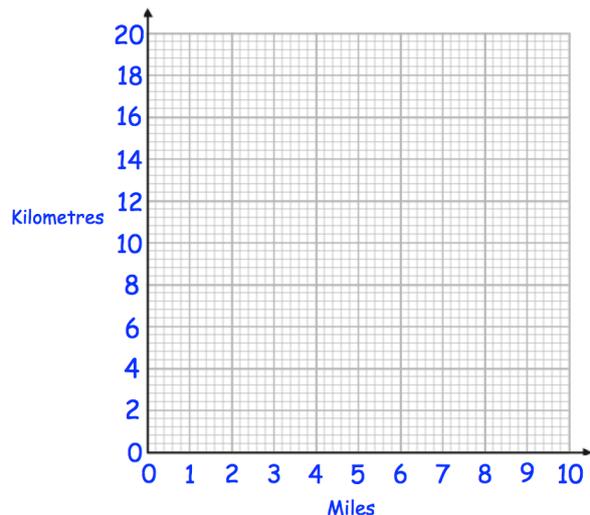
Find the ratio of the number of counters
Rosie has to the number of counters
Bethan has.

5 miles = 8 kilometres

Use this information to draw a
conversion graph.

A car travels at 60km/h

Convert this to miles per hour.





Work out 20% of 70

In a furniture shop, a table comes with six chairs.

Which of the formulae below connects the number of tables, T , and the number of chairs, C ?

Formula 1: $C = T + 6$

Formula 2: $C = 6T$

Formula 3: $T = 6C$

Formula 4: $T = C + 6$

Megan has £15.
She is going to choose one starter, one main and one dessert.
List all the possible combinations that Megan can afford.

Starter		Main		Dessert	
Soup	£2.50	Chicken	£6.25	Trifle	£3.50
Prawns	£4.25	Beef	£8.00	Brownie	£4.00
Melon	£3.50	Pork	£7.50	Eton Mess	£4.50

A circle has a diameter of 3cm.

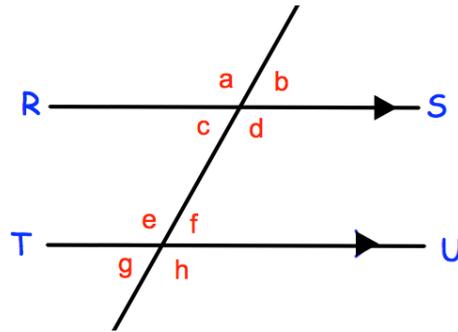
Find the circumference of the circle.



Work out $180 - 2 \times 5^2$

Work out $\frac{4}{5} - \frac{1}{3}$

Which angle is vertically opposite to angle g ?



Jack completes a journey in 2 stages.

In stage 1, Jack drives at 60 mph for 1 hour 45 minutes.

How far does he travel in stage 1?

Altogether Jack travels 120 miles in 2 hours 30 minutes.

What is his average speed in stage 2?

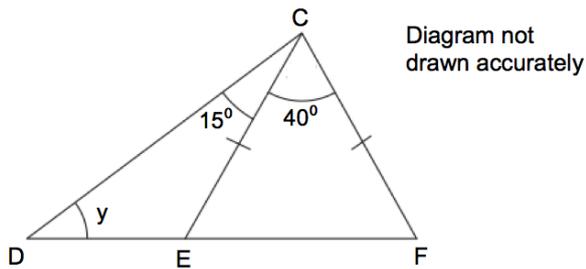


The probability of snow is 0.03

Work out the probability that it will not snow.

55 35 20 60 15

Work out the mean



Find the size of angle y

Make y the subject of $c = 2y + a$

Poppy walks 11 kilometres at a speed of 4 km/h

Calculate how long it takes Poppy.
Give your answer in hours and minutes.



Florence has £1.80
Tameka has £3

How much money should Tameka give Florence so they have the same amount?



Plot some points that would have a positive correlation



Plot some points that would have no correlation

Work out 845×129

Here are the n th terms of 4 sequences.

Sequence 1	n th term	$3n + 1$
Sequence 2	n th term	$5n + 10$
Sequence 3	n th term	$10n$
Sequence 4	n th term	$5n - 1$

For each sequence state whether the numbers in the sequence are

A	Always multiples of 5
S	Sometimes multiples of 5
N	Never multiples of 5

Sequence 1

Sequence 2

Sequence 3

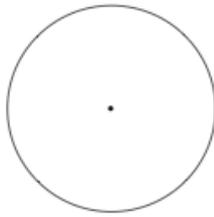
Sequence 4



There are 8 green pens, 3 red pens and 5 black pens in a pot.

One pen is picked at random.

Write down the probability that the pen is black.



Draw a chord

Harry normally works 30 hours per week.
His normal rate of pay is £9 per hour.

When Harry works more than 30 hours per week, he is paid overtime for each extra hour.

His overtime pay is 20% more than his normal pay.

Last week Harry worked 35 hours.

Work out his total pay.

Write 200 as a product of primes.

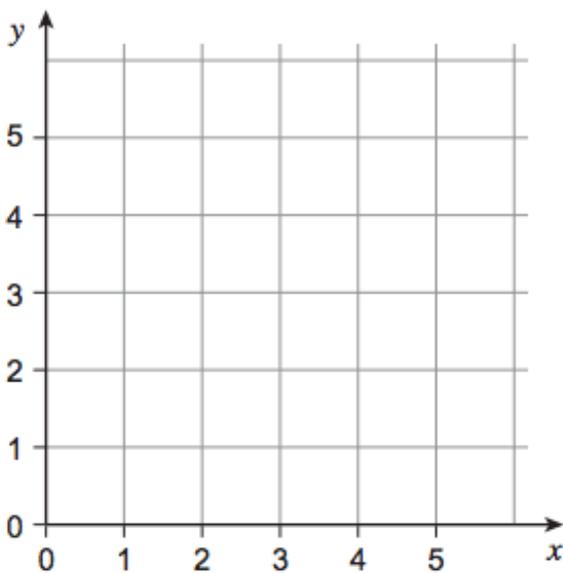


What is the order of rotational symmetry of a rectangle?

29 32 32 12 11

Work out the median

Write down the mode



Draw $y = 3$

Draw $y = x$

Ali cycles 8 kilometres in 30 minutes.

Calculate his average speed, in km/h.



Write 8.7 to the nearest whole number.

Write 3.483 correct to 1 decimal place.

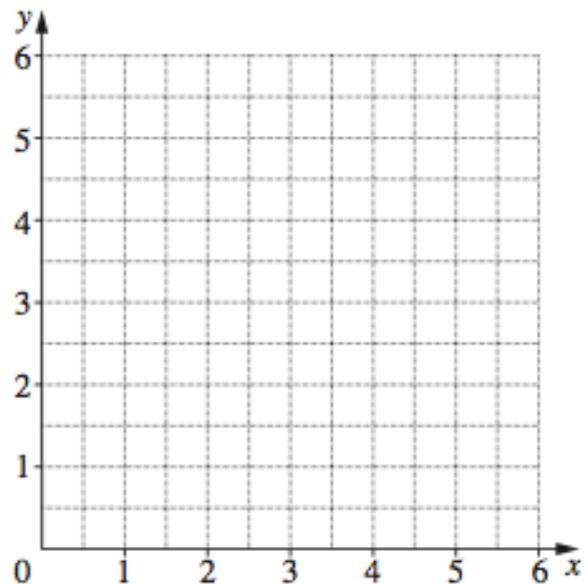
$1.825 \div 5$

Circle the correct word to describe

$$2x + 7 = 15$$

Equation Expression Identity

Draw $x = 2$



Draw $x + y = 4$

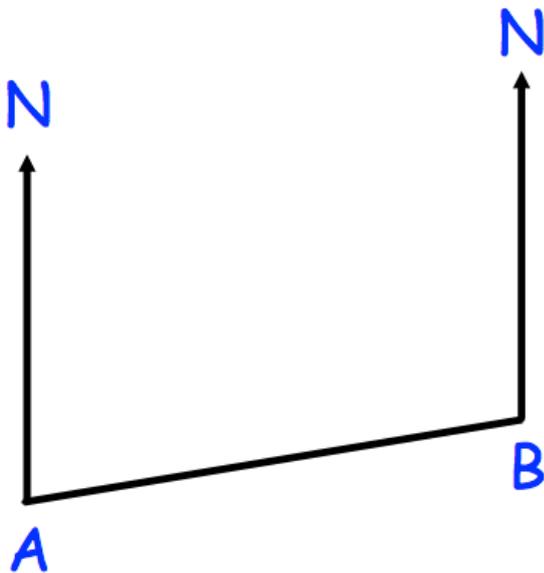


Victoria is travelling South-East.

Write her direction of travel as a three figure bearing.

A pigeon flies for 7 hours at a speed of 45 km/h.

Calculate how far the pigeon flies.



Write down the three figure bearing of B from A

Write down the three figure bearing of A from B

Six students sit an exam.
Here are the marks of five of the students

70 65 85 91 75

The mean for the six exams is 80

Work out the mark for the sixth exam.



The cost of 9 coffees is £20.25

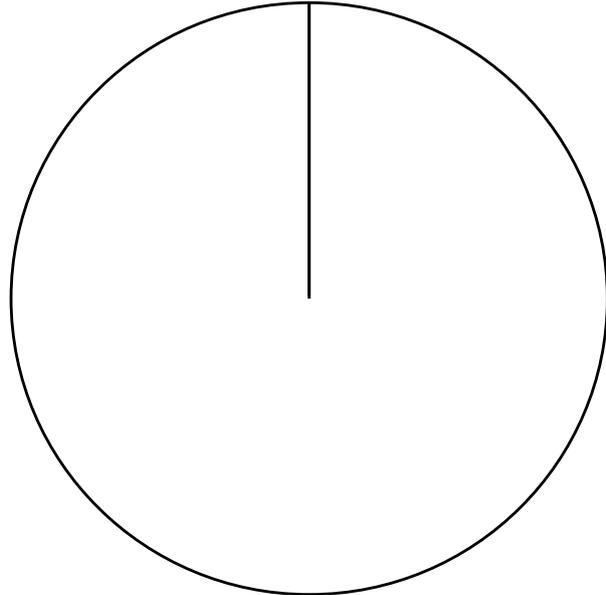
Find the cost of 1 coffee.

Find the cost of 4 coffees.

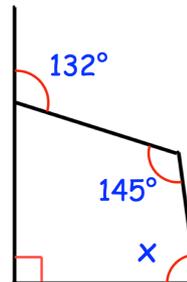
The table below shows information about the grades received in a test.

Grade	Frequency
A	10
B	15
C	13
D	5
E	2

Draw a pie chart to show this information.



Find x



Candles normally cost £9 each.

Two websites have special offers

Corbettmaths Candles

Candles'R'us

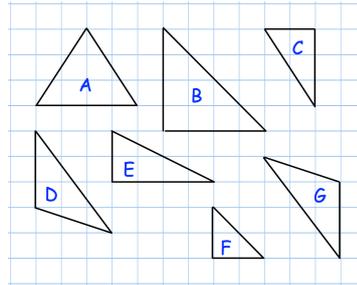
Buy 3 get 1 free

20% off

Laura wants to buy 40 candles.
Which website should Laura use?



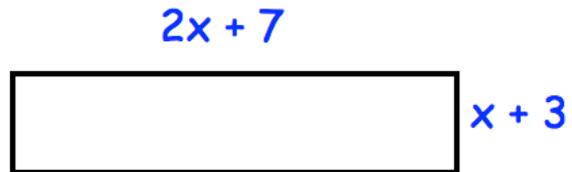
Write down the letters of two triangles that are mathematically similar.



Freya drives 20 miles to Belfast at an average speed of 40mph.

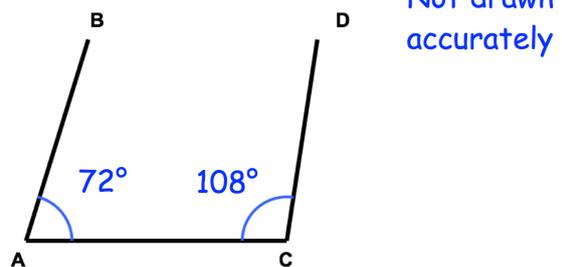
How long does the journey take?

Find an expression for the perimeter of the rectangle



Edward says the lines AB and CD are parallel.

Is Edward correct?

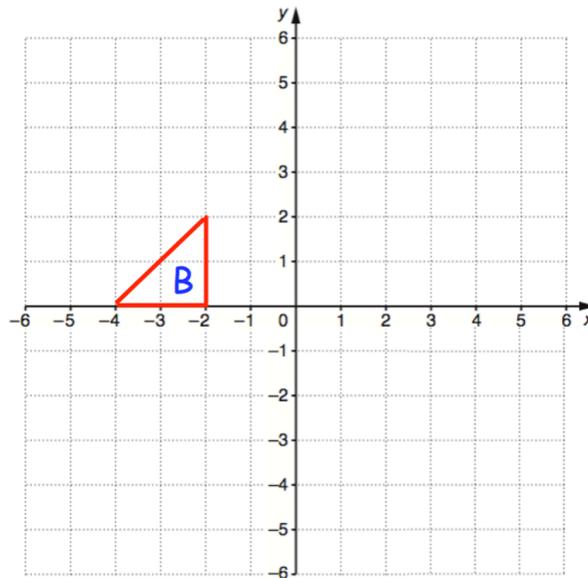


At a rugby match, the ratio of children to adults is 2 : 3
 There are 80 children in the crowd.
 Each adult ticket costs £8
 Each child ticket costs a quarter of the adult ticket.

Work out the total money made from ticket sales



Write 4714 correct to 1 significant figure.



Translate triangle B using translation vector $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$

Sahil is going to buy a car.
The car costs £24000.
He pays a deposit of 15%.
Sahil pays the rest of the money over
20 monthly payments.

Work out the cost of each monthly payment.

input \longrightarrow Multiply by 6 \longrightarrow Subtract 80 \longrightarrow output

The input is the same as the output.

Find the input



Starter **Main**
 Soup Beef
 Melon Gammon
 Prawns

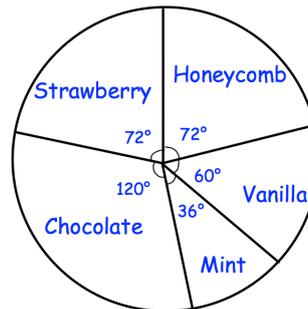
List all her possible choices.

Elsie is going to choose one starter and one main.

Rhys is x years old.
 Hannah is 7 years younger than Rhys.
 Write an expression for Hannah's age.

Each member of a club is going to receive a badge.
 There are 824 members.
 The badges are sold in packs of 15.
 Work out the least number of packs of badges that need to be bought.

The pie chart shows the flavours of ice cream sold by a shop in one day.
 There were a total of 270 ice creams sold.

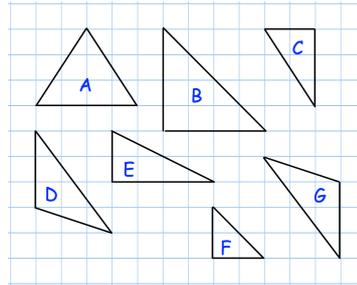


Calculate the number of vanilla flavoured ice creams sold.

Calculate the number of strawberry flavoured ice creams sold.



Write down the letters of two congruent triangles.



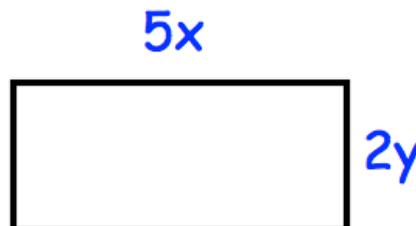
George is going on holiday to Poland

George changes £565 into Zloty.
The exchange rate is £1 = 5 Zloty

Work out how many Zloty George gets for £565.

Find the lowest common multiple (LCM) of 25 and 30

Find an expression for the area of the rectangle.



Ranjit drives 110 miles to the hotel.
His journey takes $2\frac{1}{2}$ hours.

Work out his average speed.



Solve $w + 3 = 20$

Solve $7y = 35$

Mr Cooper wants to hire a carpet cleaner.

It costs £15 per day.

Mr Cooper's final bill is £90.

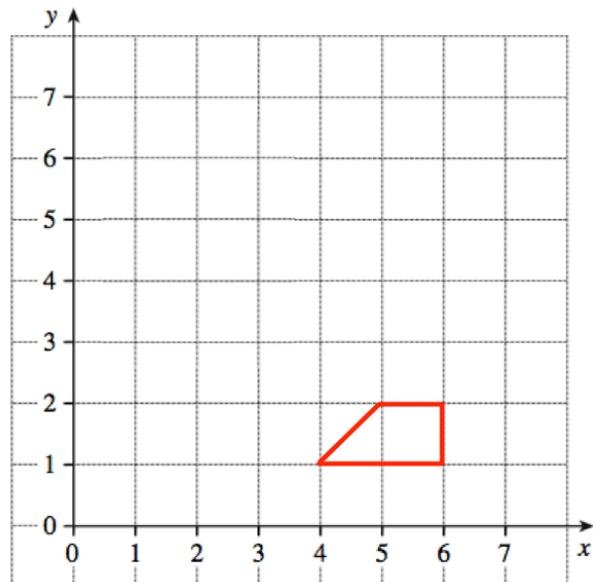
How many days did he hire the carpet cleaner for?

Arrange in order, starting with the smallest.

$$\frac{5}{8} \quad \frac{3}{4} \quad \frac{11}{20} \quad \frac{3}{5}$$

Share £405 in the ratio 2:3

Enlarge the trapezium by scale factor 3, centre (6, 0).





James buys a number of plants.
Each plant costs £4.19

How many plants can James buy for
£20?

How much change should he receive?

In a French test, Leah scored 13 out
of 20.

In a German test she scored 17 out
of 25.

Which is the better result?

Simplify $5w - 3w + 9w$

Shown below is a 2 pence coin.



0.185cm

Each 2 pence coin is 0.185cm thick.
Stephen builds a tower of 300 2p coins.
How tall is the tower?

Factorise fully

$$6y^2 + 15y$$



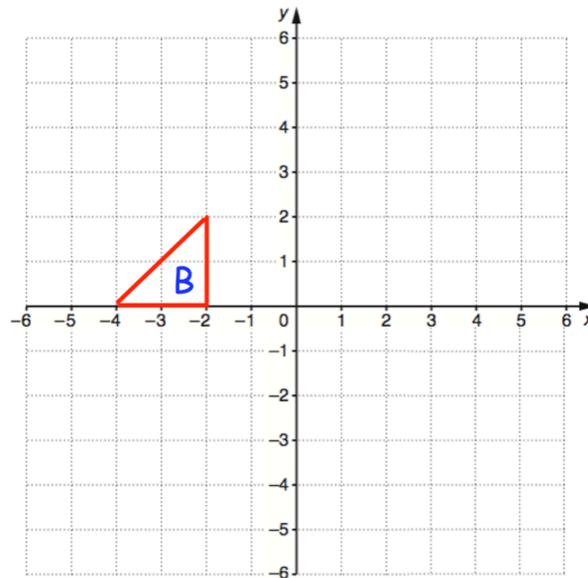
Estimate

$$\begin{array}{r} 4.01 \times 29.5 \\ \hline 1.978 \end{array}$$



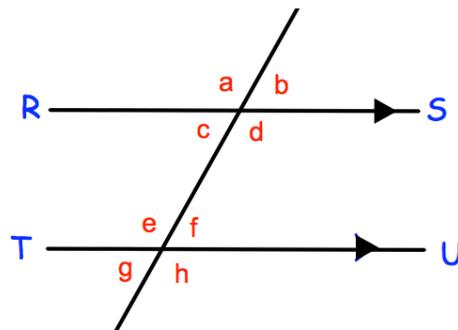
Write a number on each card so that:

The range is 7
The median is 8
and the mean is 7.



Rotate B 90° anticlockwise about (-1, 0)

Which angle is vertically opposite to angle a ?





Work out 0.3×0.5

Solve

$$\frac{W}{2} = 20$$

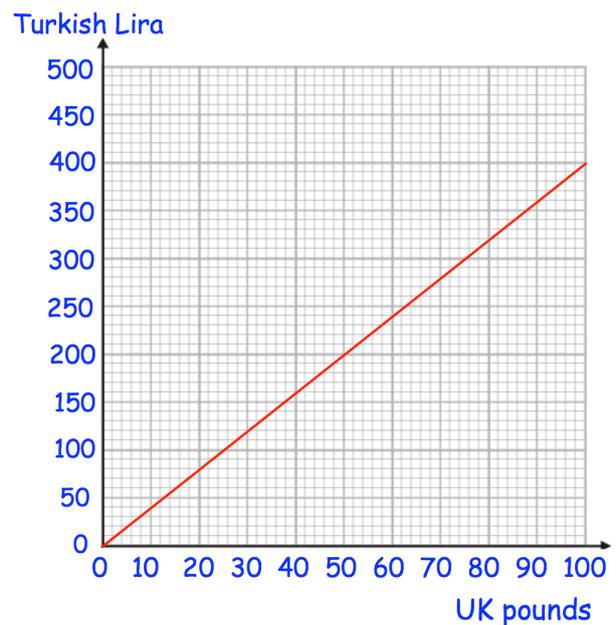
Shown is a number line.

What number is the arrow pointing to?



Max buys a T-shirt for 120 Turkish Lira.

How much in UK Pounds?



Covert £350 into Turkish Lira.



Win	
Draw	
Loss	

Key represents 2 matches

A win is worth 3 points,
A draw is worth 1 point
A lose is worth 0 points.

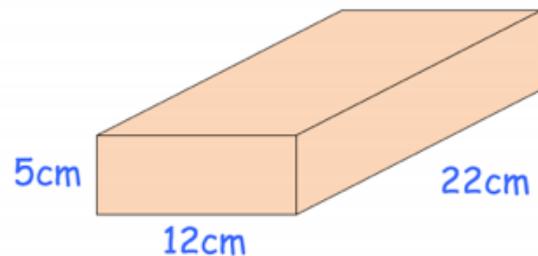
How many points did Newport County earn over the season?

List the first 6 cube numbers

Find the value of $4c + 5g$ when

$c = -6$ and $g = 1.5$

Find the volume of the cuboid.



Solve $\frac{x}{2} = 1\frac{1}{2}$



Work out $3^3 - 1$

Simplify $a^4 \div a^{-2}$

Put the names of these quadrilaterals into the correct boxes.

Square, parallelogram, kite and rhombus.

	Line Symmetry	No Line Symmetry
Two pairs of parallel lines		
No parallel lines		

Ravi says “to find the lowest common multiple of two numbers, just multiply them together.”

Explain why Ravi is wrong.



If $x = 5$

Work out the value of $4x$

If $x = 3$ and $y = 9$

Work out $2x - y$

Expand and simplify

$$3(2x + 1) + 2(x + 7)$$

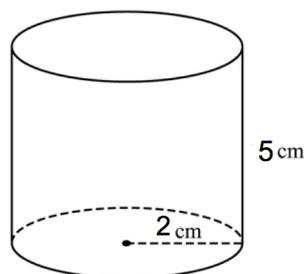
Frome
Population 26,000

This sign is correct to the nearest thousand.

What is the lowest possible number of people that live in Frome?

Solve $5(2y + 1) = 85$

Calculate the volume of the cylinder.





Work out

$$\frac{7}{20} + \frac{1}{3}$$

Imogen is organising a barbecue. She needs bread rolls and burgers.

Bread rolls are sold in packs of 20. Burgers are sold in packs of 12.

Imogen buys exactly the same number of bread rolls as burgers.

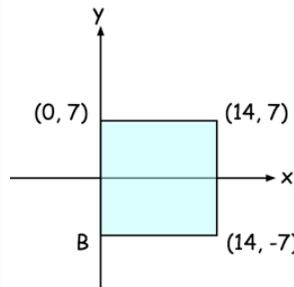
What is the least number of each pack that Imogen buys?

..... packs of bread rolls

..... packs of burgers

The diagram shows a square.

Write down the coordinates of **B**



The table shows the prices of first and second class stamps for Letters and Large Letters up to 500g.

Matt is going to post a Letter weighing 80g and a Large Letter weighing 300g. He chooses to post them both as second class.

Format	Weight	1st Class	2nd Class
Letters	0 - 100g	62p	53p
Large Letters	0 - 100g	93p	73p
	101 - 250g	£1.24	£1.17
	251 - 500g	£1.65	£1.48

How much money has Matt saved by posting second class instead of first class?



Round 18.7347 to two decimal places

$$-1 \leq x < 3$$

Write down all the possible integer values of x.

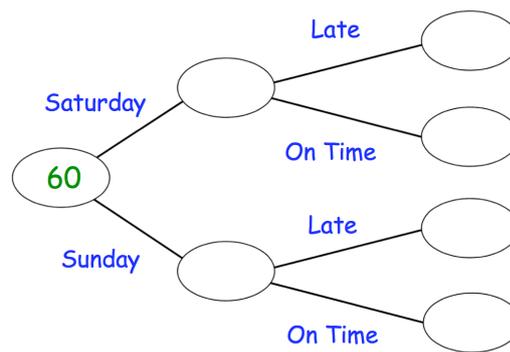
Work out $\frac{7}{8} \times \frac{3}{4}$

During a weekend, 60 buses arrive in a village.

43 of the 50 buses that arrive on the Saturday are on time.

2 of the buses that arrive on Sunday are late.

Complete the frequency tree.



What fraction of the buses are late?