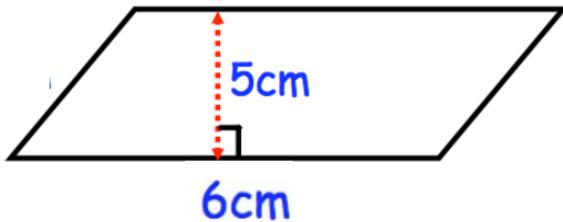




A sequence has the rule, multiply the previous number by three and then add one

1 4 13 _ _

Fill in the missing numbers



Find the area of the parallelogram

A shop sells jars of honey in two different sizes.

Medium: 600g for £4.25

Large: 1kg for £6.99

Which jar is better value for money?

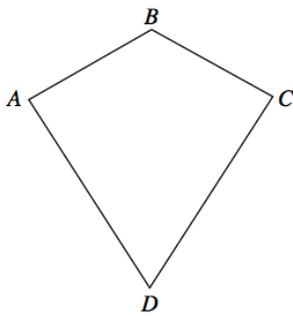
James is going on holiday in New York. James changes £800 into dollars (\$).

The exchange rate is £1 = \$1.50

Work out how many dollars (\$) James will receive.

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

88 % 0.099 $\frac{4}{5}$ 0.9 $\frac{17}{20}$



Does a kite have two lines of symmetry?

Do the diagonals cross at right angles?

Simplify

$$8w + w + 3w - 4w$$

Simplify

$$8a + 5c - 3a - 7c$$

Oliver and Yasmin share 140 sweets in the ratio 2:5.

How many sweets does Yasmin get?

Solve

$$\frac{x + 3}{4} = 8$$

An airplane has economy and first class seating.

There are s seats in each row in economy.

There are t seats in each row in first class.

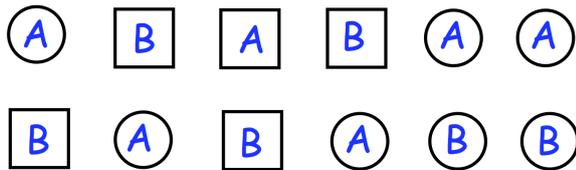
There are 9 rows in first class and 24 rows in economy.

Write down an expression, in terms of s and t , for the number of seats on the airplane.



Solve $5w = 30$

Solve $w - 4 = 12$



Complete the two-way table

	A	B
Square		
Circle		



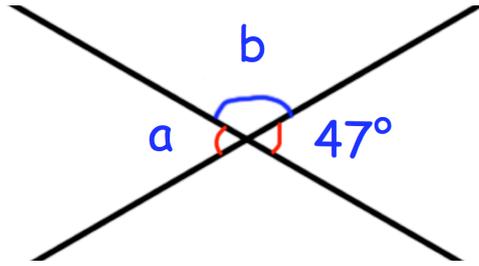
Lines of symmetry _____

Rotational symmetry order _____

Work out the range of these numbers

-8 6 -5 2.5

Factorise $a^2 + 3a$



Work out the size of angles a and b

A lorry travels 100 miles at an average speed of 25 mph.

Work out how long the journey lasts.

Olivia is measuring an obtuse angle in her maths exam.

She has written the answer 32°

Her teacher has said she has looked at the outside number instead of the inside number on the protractor.

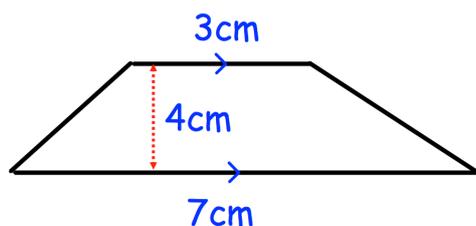
What angle should Olivia have put on her exam?

Jam is made from sugar and strawberries in the ratio 3:5.

A jar contains 240g of sugar.

How many grams of strawberries are in the jar?

How many grams of jam are in the jar?

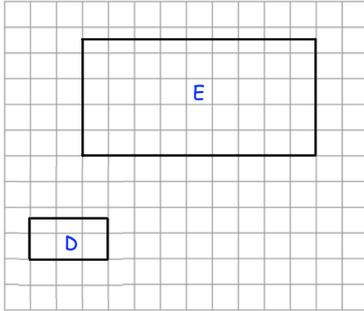


Calculate the area of the trapezium



$$\frac{2}{5} + \frac{3}{11}$$

$$\frac{1}{3} \times \frac{2}{5}$$



Rectangle E is an enlargement of rectangle D.

What is the scale factor of the enlargement?

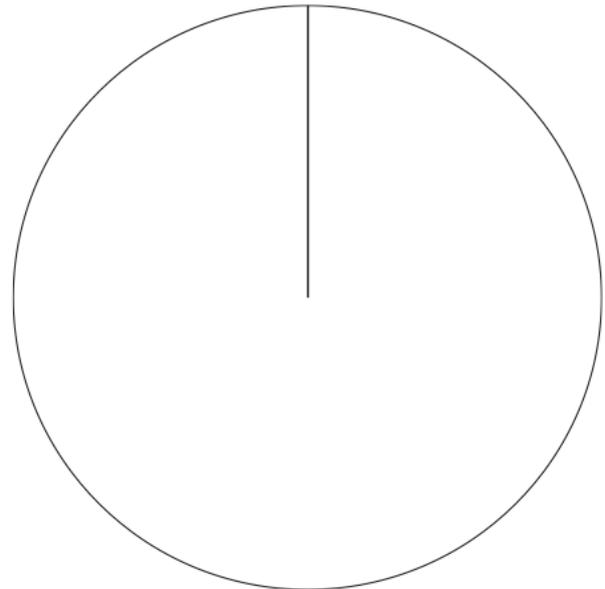
Calculate

$$2.8^2 + 7^3$$

The table gives information about students staying after school to play sport.

Sport	Frequency
Netball	15
Hockey	10
Rugby	26
Football	9

Calculate the size of each angle and then draw an accurate pie chart.





Lukas thinks of a number.

He adds 5

Then he doubles the answer

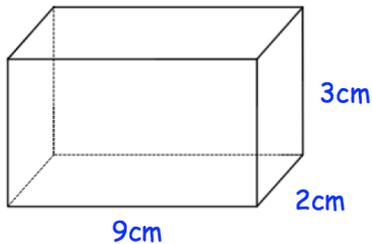
His final answer is 18

What was his original number?

Here is a sequence of numbers

3 6 12 24

What is the rule for continuing the sequence?



Calculate the surface area of the cuboid

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

0.34 $\frac{1}{3}$ 32% $\frac{7}{20}$ 0.3

A design is made from some identical rectangles and identical squares.
Each rectangle is twice as long as each square.

The perimeter of each square is 28cm.

Calculate the perimeter of the design.





Connor's watch is two minutes fast.
Grace's watch is nine minutes slow.

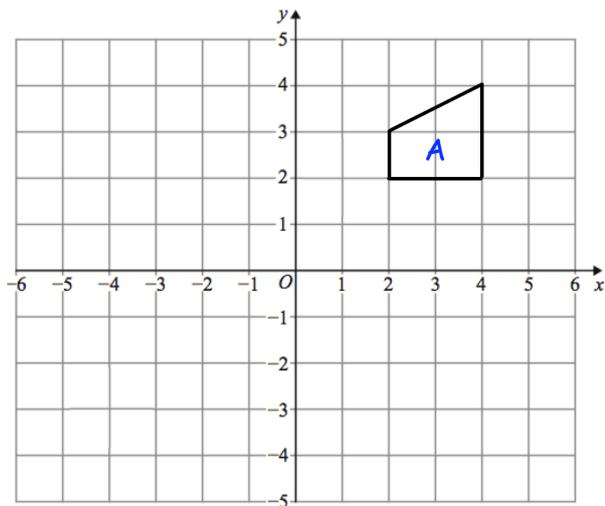
What time is shown on Grace's watch when Connor's watch shows 20:03?

Here is a rule for continuing a sequence.

Add 4
then
Multiply by 2

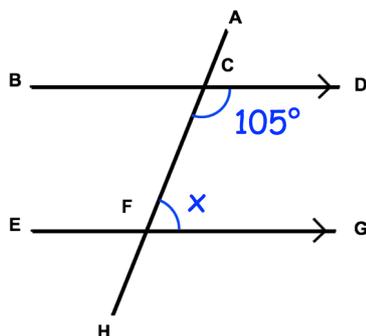
The second term of this sequence is 20.

What is the first term?



Reflect shape A in the y-axis
Label your answer B.

Rotate shape A, 90 degrees clockwise
about the origin.
Label your answer C.



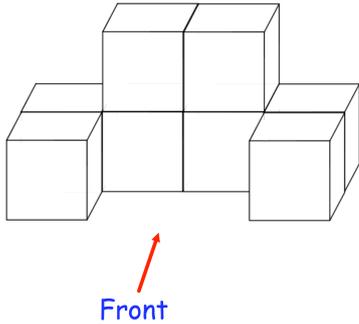
Find the size of angle x.



18% is greater than 0.2

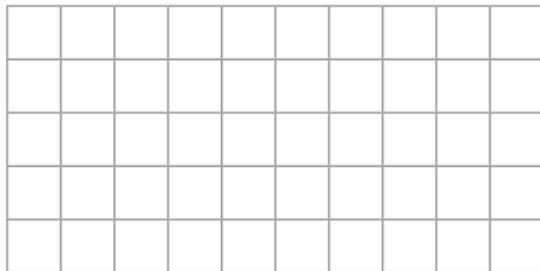


Is Ibrahim correct?
Explain your answer.

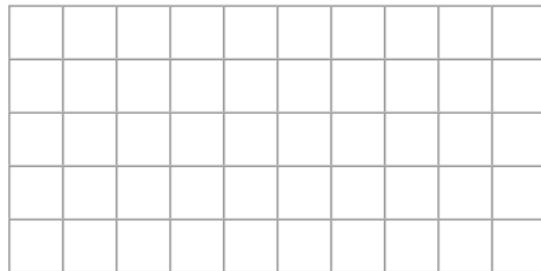


Shown is the view from the front of a shape.

Draw the side elevation.



Draw the plan view.



Two fair six sided dice are rolled.

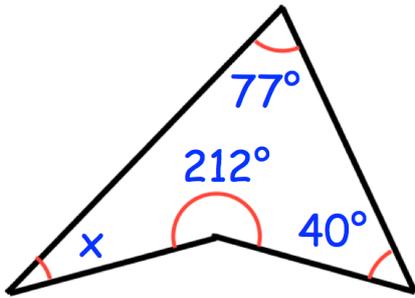


The numbers on the two dice are **multiplied** together to give a score.
Complete the table

		Dice 1					
		1	2	3	4	5	6
Dice 2	1						
	2						
	3						
	4						
	5						
	6						

Find the probability of a score of 12

Find the probability of a score of 10 or more

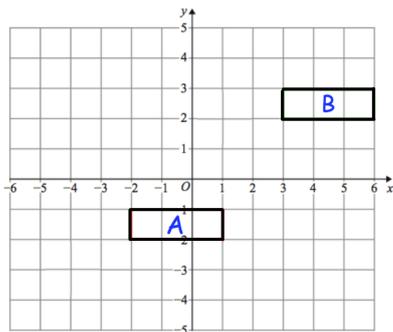


Find the size of angle x

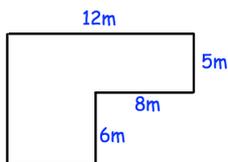
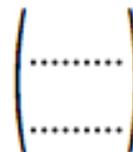
Reggie drives for 2 hours 30 minutes at an average speed of 36 mph.

How far does Reggie drive?

Expand $5(x - 2)$



Write down the translation vector that would take B to A.



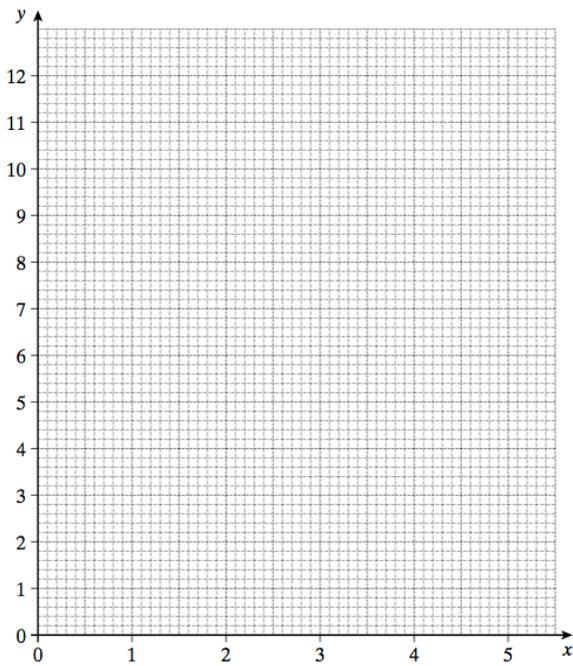
Work out the cost of the new fence.

Tim wants to build a new fence around the chicken enclosure.

Each metre of fencing will cost £7.99



My number is 200
to the nearest 10, but is not 200.
What could my number be?



Complete the table of values for
 $y = -2x + 11$.

x	0	1	2	3	4	5
y			7	5		1

On the grid, draw the graph of
 $y = -2x + 11$ for values of x from 0 to 5.

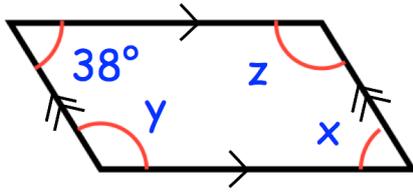
Share £420 in the ratio 2:3

The mean of four numbers is 5.
Three of the numbers are 2, 3 and 8.
Work out the fourth number.

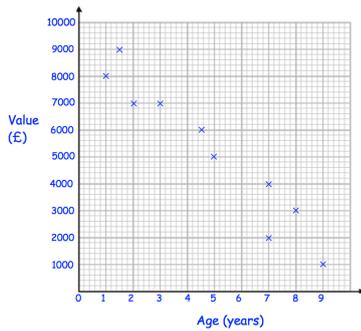


Shown is a parallelogram

Find x, y and z



Solve $2w + 5 = 37$



What type of correlation is shown?

Write 18 as a product of primes

£330 is divided between John, Filip and Cleo in the ratio 6:1:8

How much does each get?



Write 61% as a decimal

Write 0.14 as a percentage

3 9 27 81

What is the rule for carrying on the sequence?

Explain why 8028 is not a term in this sequence.

A taxi journey costs £3 for 5 miles.

How much is the cost for a 90 mile journey?

Make w the subject of the formula

$$y = 7w + a$$

The ratio of green to blue counters in a bag is 3:5.

There are 9 green counters.

How many counters are in the bag?



$$50\% \text{ of } 60 = \underline{\quad}$$

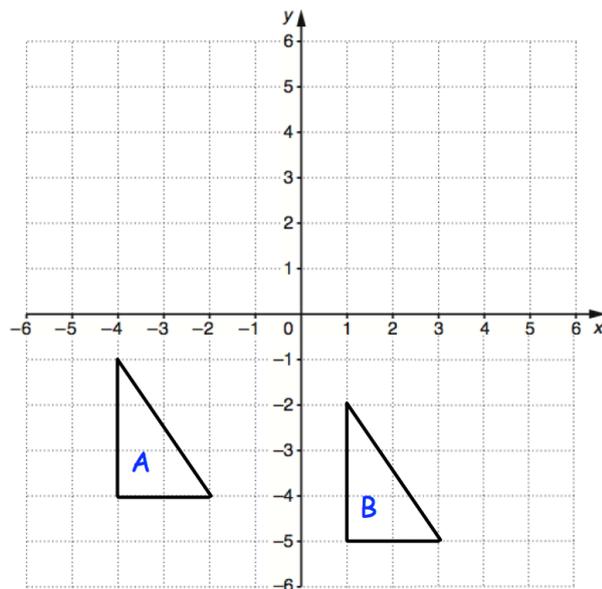
$$25\% \text{ of } \underline{\quad} = 10$$

$$\frac{4}{5} \times \frac{3}{7}$$

$$\frac{3}{5} \div \frac{6}{7}$$

A red light flashes every 3 seconds.
A yellow light flashes every 4 seconds.
A green light flashes every 5 seconds
They all flash at the same time.

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



Reflect triangle B using the x-axis as
the mirror line.
Label your answer C.

Translate triangle A using the vector

$$\begin{pmatrix} 0 \\ 4 \end{pmatrix}$$

Label your answer D.



There are 130 students in Year 11.

The number of pupils in Year 11 is one-sixth of the total number of pupils in the school.

Work out the total number of pupils in the school.

$$\square \times -7 = 42$$

$$\square \div 3 = -15$$

This recipe serves 4 people.

Bolognese Sauce

Minced Beef	500 g
Chopped Tomatoes	750 g
Mushrooms	40 g
Chicken Stock	150 ml

How much chicken stock would be needed to serve 10 people?

Hattie has £12.30

Max has £25.20

How much should Max give Hattie so that they will have the same amount of money?

Make a the subject

$$2a + f = p$$

15th July

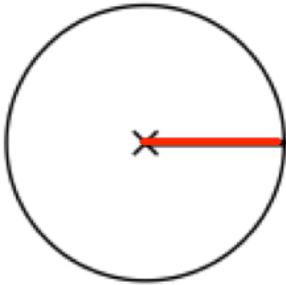
Foundation 5-a-day



Corbettmαths

Sofia buys 59 apples which cost 21p each.

Estimate the total cost.



What part of the circle is shown?

Simplify

$$y^7 \times y^4$$

Simplify

$$\frac{w^4}{w^6}$$

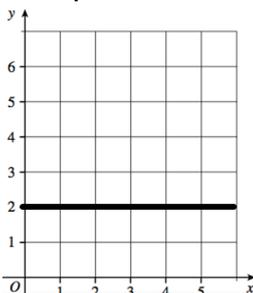
The n th term of a sequence is $n^2 + 3$

Write down the first three terms.

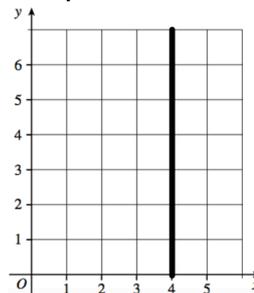
Find the n th term of

9 11 13 15 17 ...

What is the equation of this line?



What is the equation of this line?



16th July

Foundation 5-a-day



Corbettmαths

Calculate

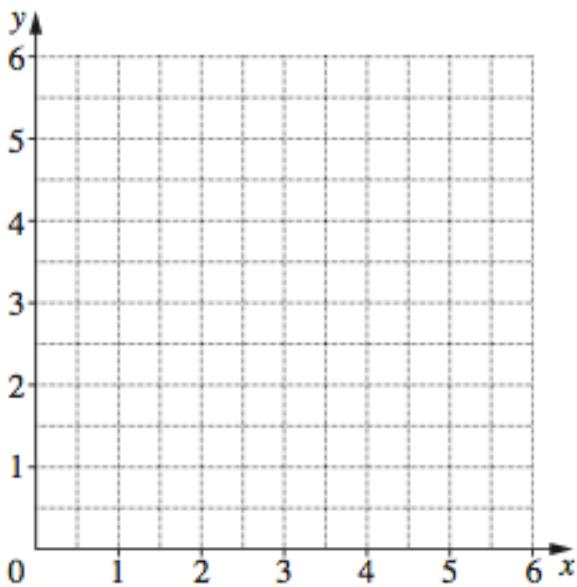
$$5 \times 10^2$$

Calculate

$$1.5 \times 10^2$$

Work out the product of -4 and 7

Work out the product of -4 and -3



Draw $y = 4$

Draw $y = 2x$

List 4 numbers with a median of 6 and a range of 4.



A shopkeeper buys a box of 10 pens for £4.

He sells them for 65p each.

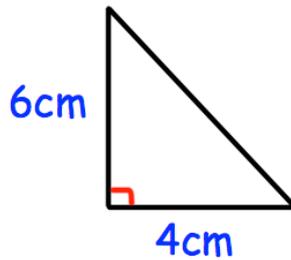
What is his profit?

5 8 5 12

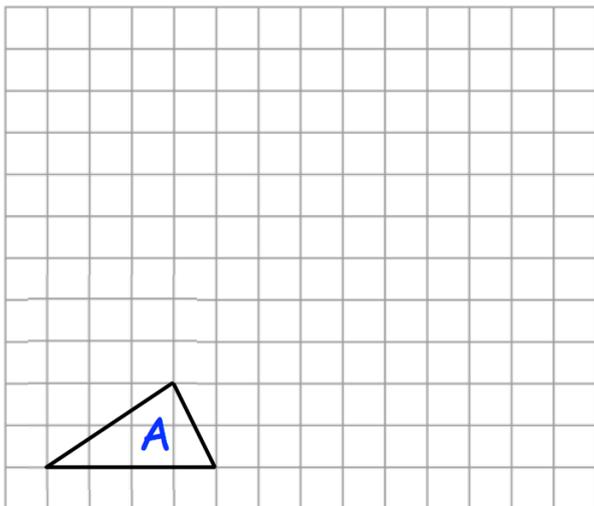
Calculate the mean

Calculate the range

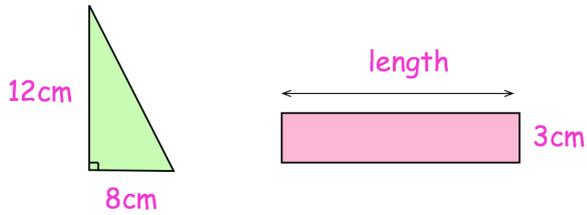
Calculate the mode



Calculate the area of this triangle



On the grid, draw an enlargement of triangle A using scale factor 2.



Find the length of the rectangle

The area of the triangle is equal to the area of the rectangle.

Starter	Main	Dessert
Soup	Curry	Ice Cream
Fish	Pizza Burger	Danish

List all the possible combinations.

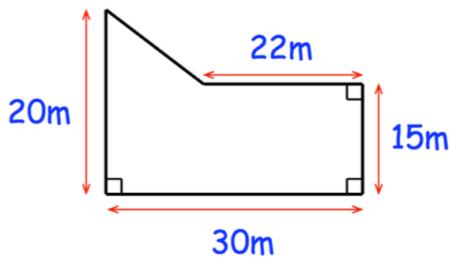
Marco chooses one starter, one main and one dessert.

If $x = 5$

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

Work out the value of $4x + 3$

Work out $5x - 2y$



Find the area of this shape.

$x = 2y + 3$

Rearrange the formula to make y the subject

19th July

Foundation 5-a-day



Corbettmαths

$$\boxed{2} \times \boxed{} = \boxed{-16}$$

$$\boxed{-1} \times \boxed{} = \boxed{2}$$

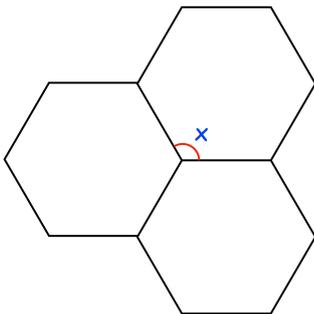
Gregory received £300.

He gave $\frac{1}{3}$ of it to his favourite charity
and spent $\frac{2}{5}$ of it on a new violin.

What fraction of his money is left?

Work out

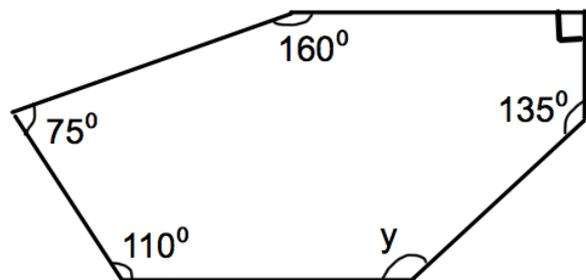
$$\frac{8}{9} - \frac{3}{5}$$



Three identical regular hexagons are placed together.

Find x

Find the size of the angle labelled y





9 1 2 8 3 8 4 1 5 6

Calculate the median

The population of an island in 2000 was 30000

By 2010 the population has decreased by $\frac{3}{5}$

The population increased by 35% between 2010 and 2020.

What was the population of the island in 2020?



The perimeter of this parallelogram is 30cm

The length of each short side is 6cm. Calculate the length of each long side.

Calculate the nth term for

9, 20, 31, 42, 53 ...

Using the nth term, work out the 100th term

Opinion	Frequency
Yes	3
No	11
Undecided	4

Oscar is drawing a pie chart.

Work out the size of each angle.



Francesca earns £400 a week

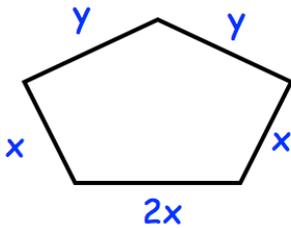
She is given a 20% pay rise.

What is her new wage?

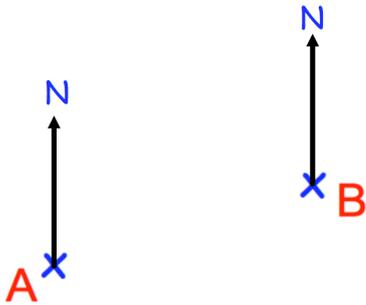
Chloe has a ribbon 8 metres long.

She cuts two pieces from the ribbon.
The first piece was 1.28 metres long.
The second piece was 0.65 metres long.

How much ribbon is left?



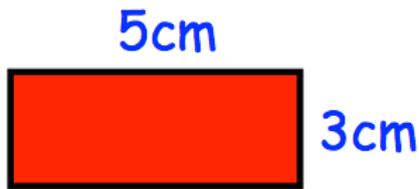
Find an expression for the perimeter of the pentagon.



Measure the bearing of B from A.

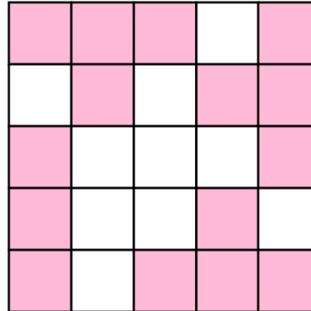
Factorise

$$w^2 - 5w$$



Sketch a triangle with the same area as this rectangle.

Shade one more square so this pattern has rotational symmetry order 4.



Write 24 as a product of primes

Write 240 as a product of primes

Sarah makes cupcakes.
She makes 16 cupcakes per hour.

She makes cupcakes for $5\frac{3}{4}$ hours each day, for 3 days.

The cupcakes are packed into boxes that hold 12 cupcakes.

How many boxes are needed to hold all the cupcakes Sarah has made in 3 days?



0.64 is less than $\frac{13}{20}$



Is Sophia correct? Explain your answer.

Work out

$$0.447 \div 3$$

Work out

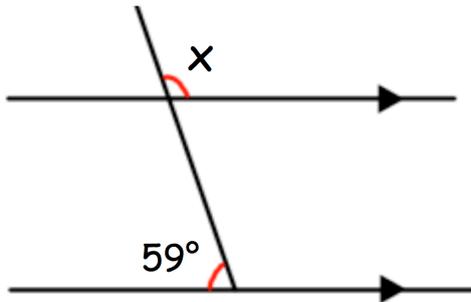
$$0.017 \times 0.8$$

Sian thinks of two different numbers

The two numbers have a total of 3

The same numbers have a difference of 5

What two numbers did Sian think of?



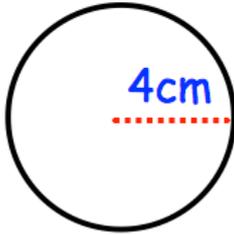
Find x .

Trains to Portadown leave a train station every 14 minutes.
Trains to Portrush leave a train station every 20 minutes
A train to Portadown and a train to Portrush both leave the train station at 8am.

When will a train to Portadown and a train to Portrush both leave the train station at the same time?



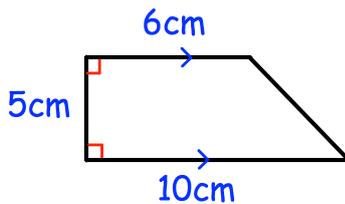
Find the circumference



Shown below is a rectangle.



Find the perimeter of the rectangle.



Find the area of the trapezium.

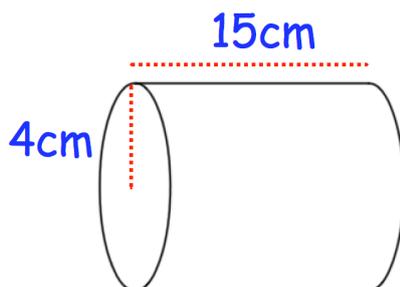
Marley has 5 cards, each with a number written on it.

The median is 9

The mode is 12

The range is 7

Write down a possible set of numbers Marley could have.



Calculate the volume



Aisha has a mobile phone.
Text messages cost 4p each.
Calls cost 6p per minute.
She also has to pay £10 each month.

In September, Aisha:
- made 90 minutes of calls
- sent 130 text messages.

How much was her bill in September?

Expand $7(y + 4)$

Expand $5(3y + 1)$

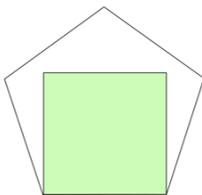
Calculate 4.25^4
and write down the full calculator display

Round your answer to one decimal place

Esme has y marbles.
Sean has 25 marbles.
Nylah has 10 marbles.

Write down an expression for the total number of marbles they have.

Here is a square inside of a regular pentagon.



The perimeter of the square is 18cm.
What is the perimeter of the pentagon?



In 5 games, a footballer scores:

1 2 1 3 4

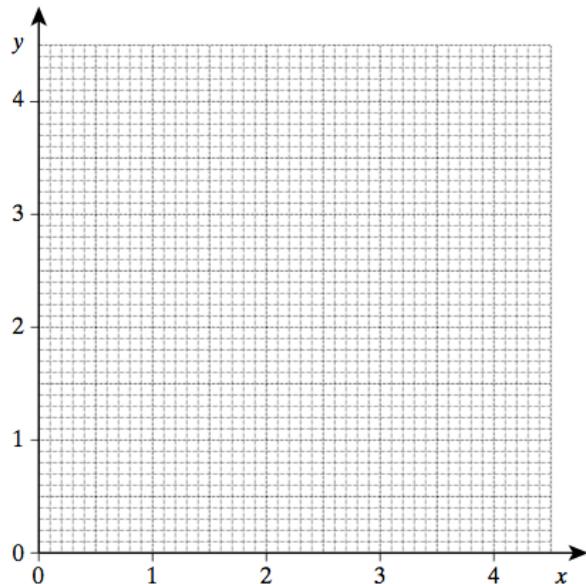
What is the median?

What is the range?

Factorise

$$y^2 + 8y$$

A pizza has a circumference of 50cm.
Work out the diameter of the pizza.



Complete the table of values for

$$y = \frac{1}{2}x + 2$$

x	0	1	2	3	4
y					

On the grid, draw the graph of

$$y = \frac{1}{2}x + 2$$



Simplify

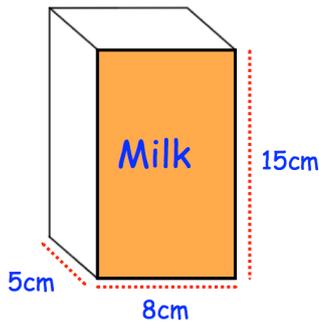
$$a + a + a + a + a$$

Simplify

$$2a + 3a + a$$

$$10\% \text{ of } 60 = \underline{\quad}$$

$$10\% \text{ of } \underline{\quad} = 4$$



Calculate the volume

$$\text{Solve } 4w - 2 = 32$$

A car travels 75 miles in 1 hour and 30 minutes.

Calculate the speed.



Simplify

$$10m - 4m$$

Simplify

$$m + m + m + m + m - m$$



Holly works out the answer to $135.66 + 193.88$ on a calculator. Her answer is shown on the calculator.

Round her answer to one decimal place.

Holly wanted to calculate the mean of 135.66 and 193.88.

Finish this for her.

Factorise

$$12 + 4p$$

Sophie went to Spain.
She changed £220 into euros (€).

The exchange rate was £1 = €1.62

Change £220 into euros (€).



Expand $2(y - 10)$

a is an even number
b is an odd number

Is $a + b$ an odd number, an even number or could it be either?

Increase £740 by 22%

Decrease £65 by 13%

Orla is planning a trip for her friends

Here are the costs for the trip.

Entry fee £17 per person
Transport £320
Insurance £90
Other costs £80

Orla charges £21 per person for the trip.
100 people go on the trip.

Has Orla collected enough money to pay for all the costs of the trip?



It costs £40 to hire a car for the first day, then £15 per extra day.

How much does four days cost?

Tahir has £60

He gives $\frac{1}{4}$ to his mum

He gives $\frac{2}{3}$ to his friend

Tahir keeps the rest.

How much money is Tahir left with?

Sean is recording information about the cars that he is selling.

Put a cross in the box to indicate whether each of the following is discrete or continuous data.

The length of the car

Discrete

Continuous

The number of doors

Discrete

Continuous

The first 5 terms of a sequence are

2 8 14 20 26

Find the nth term

The price of a new car is £27000

In a sale, the price is reduced by 30%

Brodie buys the car in the sale.

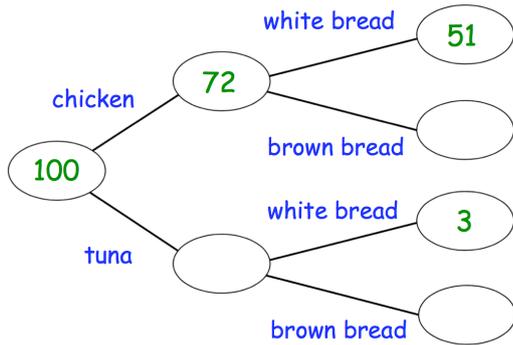
He pays a £8000 deposit and pays the rest over 50 monthly payments.

Find the cost of each monthly payment.



$$\frac{7}{10} - \frac{2}{3}$$

$$\frac{2}{9} \div \frac{5}{6}$$



Shown is a frequency tree with some information about the types of sandwiches at a buffet.

Complete the frequency tree

Finn picks a sandwich at random.

Find the probability that the sandwich has been made with brown bread.

A restaurant sells two different portion sizes of doughballs.

6 doughballs for £3.50

or

9 doughballs for £5.30

Which is the better value for money?

Calculate the area of this circle

