



Simplify

$$4a + 2a - a$$

Simplify

$$3w + 8y - 2w + 2y$$

A football shirt normally costs £40.

A shop offers a 30% discount.

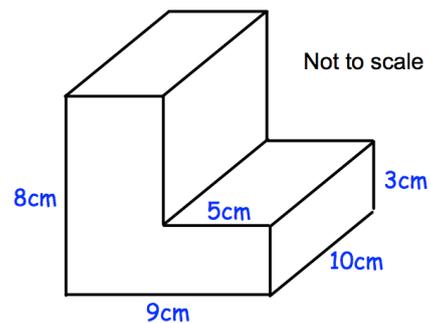
What is the new price of the football shirt?

Emilia is paid £10 per hour.
She works $2\frac{1}{2}$ hours each day.

In one week she worked 5 days.

How much did Emilia earn in that week?

Work out the volume of the prism.

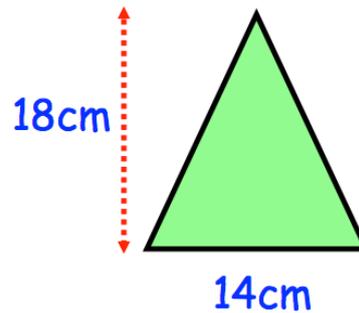


Rearrange $y = 4x + 1$ to make x the subject



Write down the order of rotational symmetry of the shape shown

Calculate the area of the triangle



Work out $\frac{1}{2} + \frac{5}{12}$

Work out $\frac{9}{10} - \frac{2}{3}$

Mr. Jones needs a plumber.
The job should take 4 hours.

Which company should he hire?

Plumbers'R'us
£50 call out charge
+
£30 per hour

Plumb 4 u
£40 per hour

Shown is a number line.

What number is the arrow pointing to?



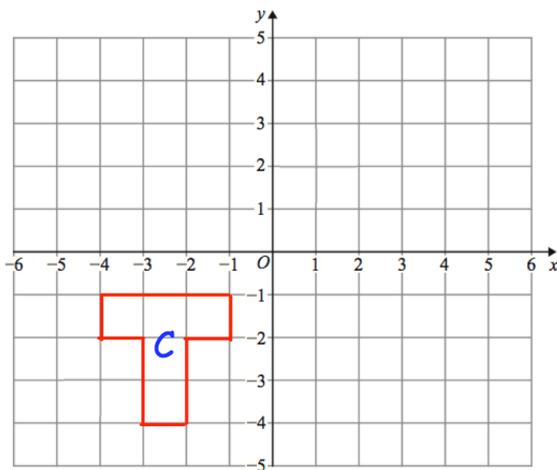
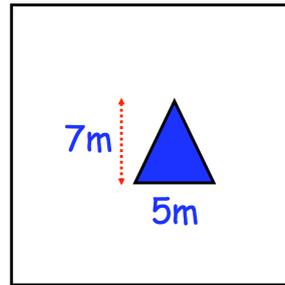


The small bottle holds 250ml.
The large bottle holds 2L.

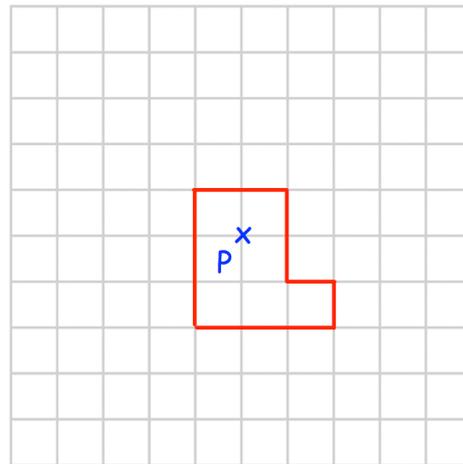
How many times larger is the large bottle?

The perimeter of a square grass field is 60m. In the field, there is a triangular pond.

Find the area of the field that is grass.



Translate C by $\begin{pmatrix} -1 \\ 5 \end{pmatrix}$



Enlarge by scale factor 2

Write 66 as a product of primes



Small pack: 4 batteries for £1.80
 Large pack: 6 batteries for £2.76

Which is better value for money?

Below is part of a customer's electricity bill.

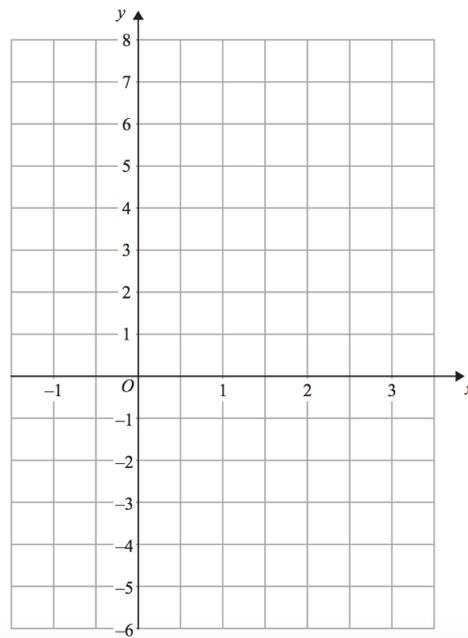
Previous reading 29381
 Present reading 30122

Each unit costs 20p

Work out the total cost

Complete the table of values for
 $y = 2x - 3$

| | | | | | |
|---|----|----|----|---|---|
| x | -1 | 0 | 1 | 2 | 3 |
| y | | -3 | -1 | | |



On the grid, draw the graph of $y = 2x - 3$
 for values of x from -1 to 3.

Find the nth term of

18, 23, 28, 33, 38

Find the 100th term

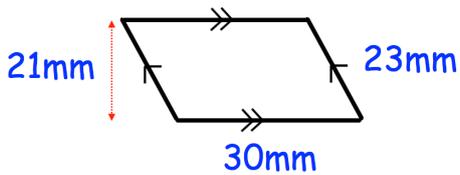


Write 93.155 to the nearest whole number.

Write 93.155 to one decimal place.

Calculate

$$\frac{1}{0.2^2}$$



Calculate the area of the parallelogram

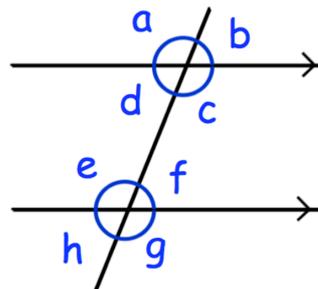
Solve

$$5x - 4 = 26$$

Solve

$$\frac{x - 1}{3} = 4$$

Which angle is corresponding to e?

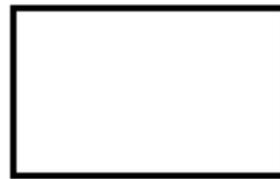
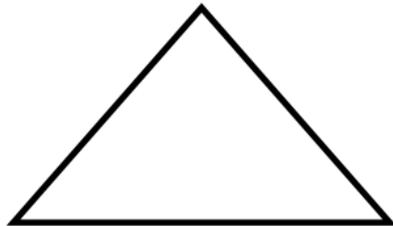




-4°C 3°C -7°C -12°C

Work out the range of the temperatures.

The shape below **are drawn accurately**



Which shape has the largest perimeter?

Which shape has the largest area?

Theo says

“the difference between two consecutive cube numbers is always odd.”

Is Theo correct?
You must show your workings.

Simplify

$$y^8 \times y^{-2}$$

Simplify

$$2ay \times 4a$$

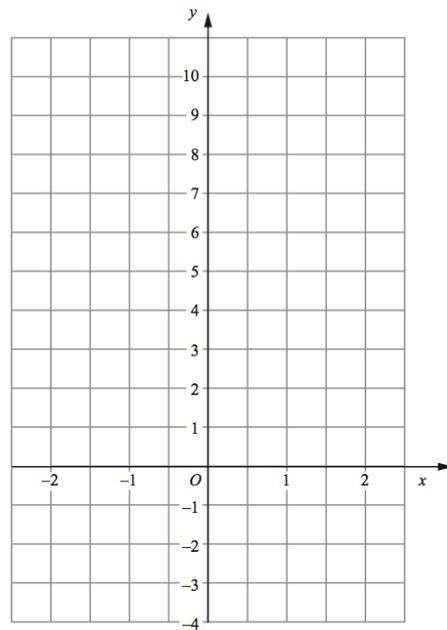


Decrease 15000 by 7%

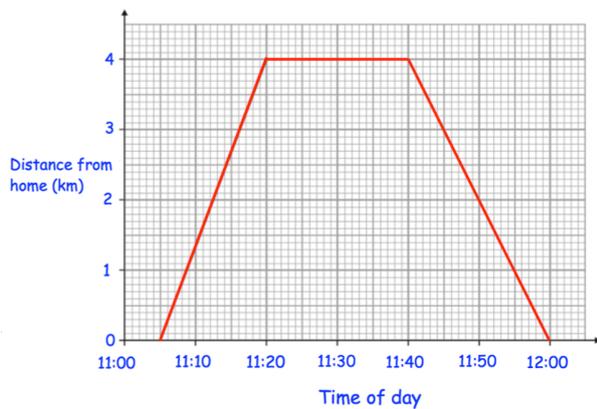
Complete the table of values for $y = 3x + 4$

| | | | | |
|-----|----|---|---|---|
| x | -1 | 0 | 1 | 2 |
| y | | | | |

Draw the graph of $y = 3x + 4$.



Priya goes for a cycle from her house to the post office, 4km away.



How long did it take Priya to cycle to the post office?

Work out Priya's speed cycling to the post office.



Write 17% as a decimal

Write 0.1 as a fraction

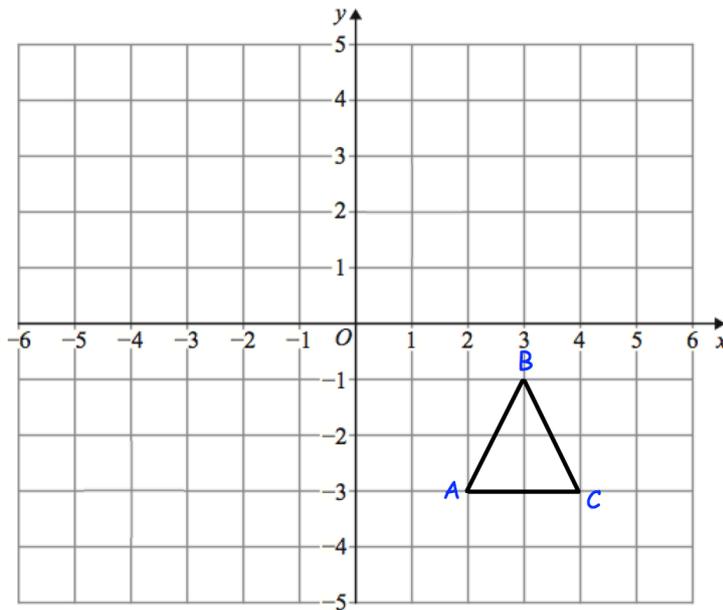


In 5 games, a footballer scores:

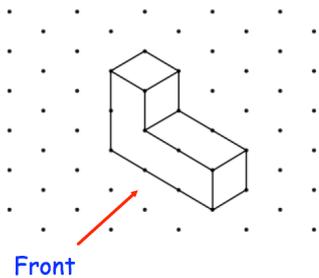
1 2 1 3 0

What is the median?

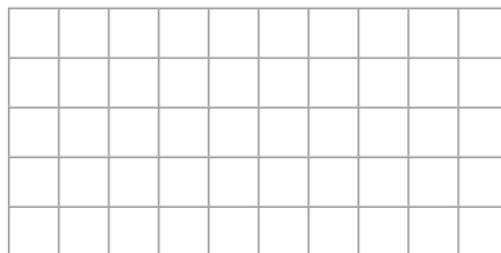
What is the range?



Rotate triangle ABC 180° about the origin



Draw the plan view





Apples cost £1.00 per kg
Oranges cost 24p each
Tomatoes cost £2.40 per kg

Dara buys:
0.5 kg of apples
2 oranges
2 kg of tomatoes

Work out the total cost

$$p = 5$$
$$a = 6$$

Work out the value of $3a + 8p$

$$\text{Solve } 3w = 18$$

$$\text{Solve } 4w + 2 = 38$$



This wheel has a radius of 21cm.
Calculate the circumference.

$$\underline{183 + 892}$$

$$10.4 \times 8.75$$

Write down your full calculator display.

Write your answer to 3 significant figures.



Given $37 \times 102 = 3774$

Work out 37×103

Expand $8(a + c)$

Expand $x(x + 4)$

Calculate the nth term

3 7 11 15

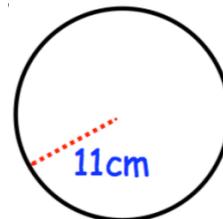
Is 801 a term in the sequence?

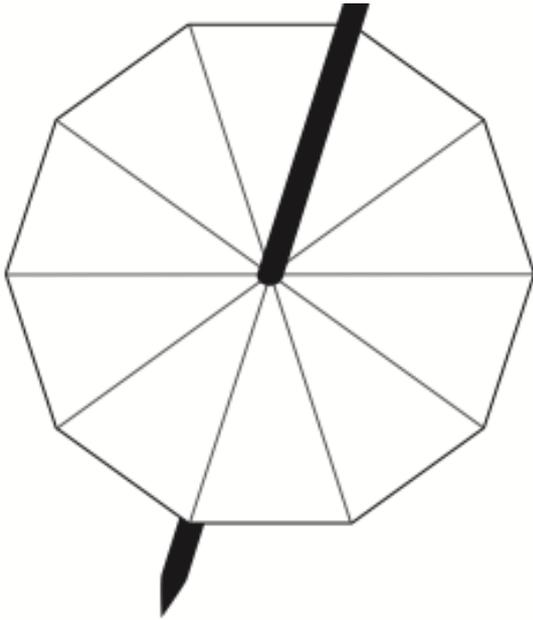
Use your calculator to work out the value of

$$\frac{(7.8 \times 1.4)^3}{(5.5 - 3.3)^2}$$

Write down all the figures on your calculator display.

Calculate the area of the circle





This spinner has 10 equal sections.
Label the spinner so that:

- It has an even chance of landing on an odd number.
- An 8 is more likely than a 4.
- An 8 and a 7 are equally likely.
- It is impossible to get a number above 8.

Phoebe changes £16 into US dollars.
The exchange rate is £1 to \$1.40

How many US dollars does Phoebe receive?

A scale drawing has a scale of 1:500
In real life the length of a boat is 150m

What is the length of the boat on the scale drawing?

Give your answer in centimetres.

Write 72 as a product of primes



This table shows the distances, in miles, between some towns.

| | | | | |
|---------|-----------|------------|------------|--|
| Foxtown | | | | |
| 52 | Sandcliff | | | |
| 70 | 32 | Red Island | | |
| 31 | 14 | 28 | Donhampton | |

Write down the distance from Sandcliff to Donhampton.

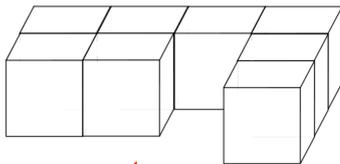
Which two towns are the furthest apart?

George visits his friend and returns home. He has travelled 64 miles in total.

Where do they live?

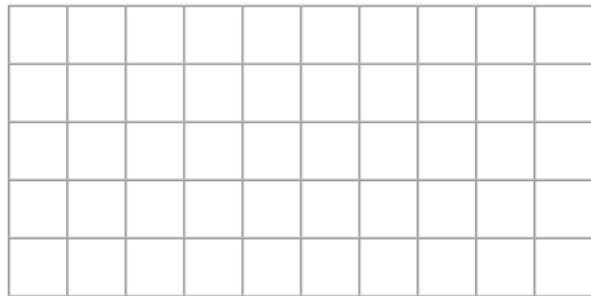
$$\frac{3}{4} + \frac{1}{12}$$

$$\frac{5}{14} \times \frac{3}{4}$$



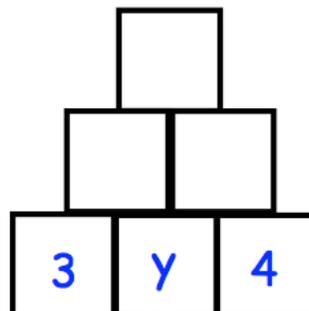
Front

Draw the plan view



To find the contents of each empty box, multiply the two terms directly beneath it.

Complete the multiplication pyramid.





Safia sends 14 text messages daily that cost 5p each.
She makes 3 calls each day costing 25p each.

How much does she spend altogether over five days?

What is the smallest number that is divisible by both 3 and 11?

What is the smallest number divisible by both 6 and 9?

Matt's age and Noah's age add up to 64.

Matt is 36 years older than Noah.

How old is Noah?

$$W = 3a + 2c$$

Find W if $a = 7$ and $c = 8$

Find W if $a = 3.5$ and $c = 2.2$



What is the bearing of A from B?



Work out the mean.

19 8 5 13 21 0

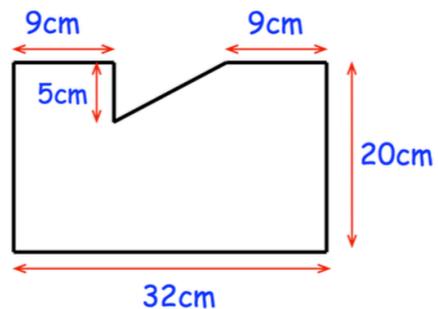
Work out the median

Work out 4^3

Factorise $3x + 9$

Factorise $y^2 + 5y$

Work out the area of this shape



Aoife has 20p coins and 50p coins in the ratio 4 : 9

Aoife has £4 of 20p coins.

How many 50p coins does she have?



A square has a perimeter of 28cm.
What is the area of the square?

Martin thinks of a number.

He multiplies it by 3.
He subtracts 12.

His answer is the same as his starting number.

A cinema records some information about the visitors they have one weekend.

| Day | Males | Females | Total |
|----------|-------|---------|-------|
| Saturday | | 115 | 212 |
| Sunday | | | |
| Total | 143 | | 360 |

Fill in all the missing values

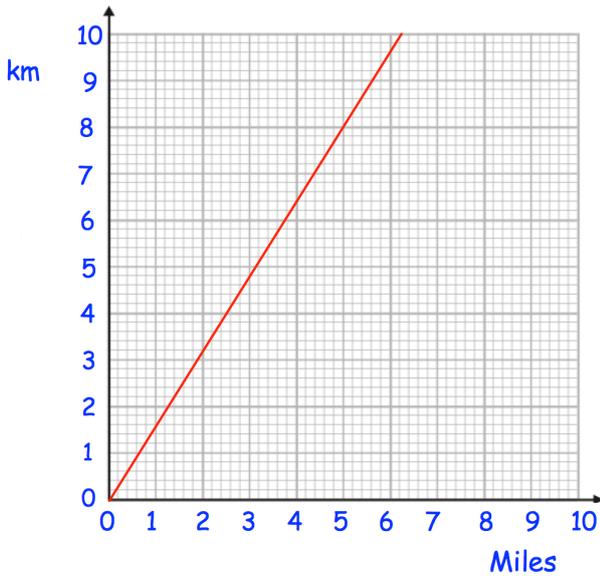
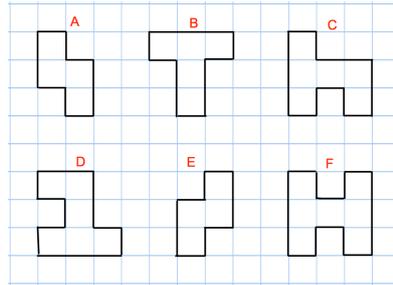
Solve

$$\frac{x + 5}{2} = 12$$

Rearrange $y = 2x + 1$ to make x the subject



Which shape is congruent to C?



Change 4km into miles

Change 15 miles into kilometres

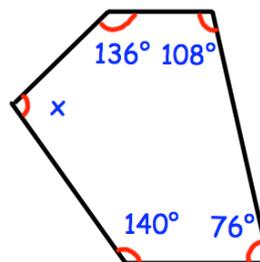
The names of three quadrilaterals are below.

square kite parallelogram

Write each name in the correct position in the table below.

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

Find x





$$\square + \square 2 = \square -1$$

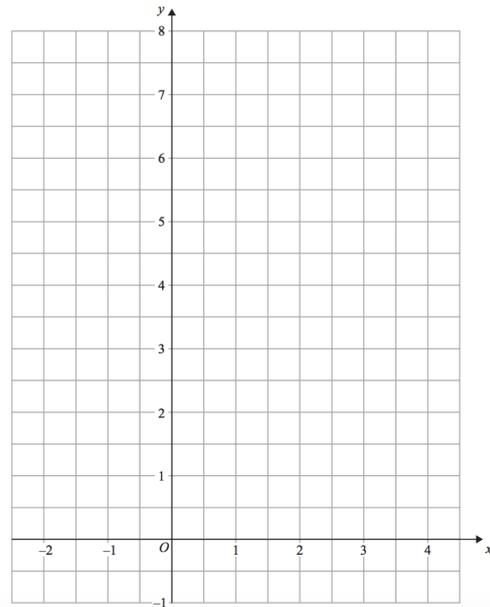
$$-6 \times \square = 36$$

List the first 5 cube numbers

Complete the table of values for

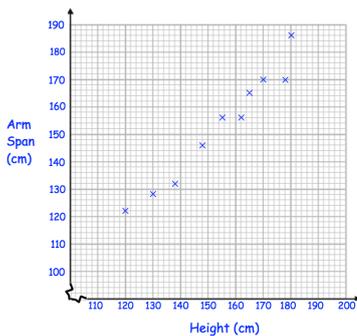
$$y = \frac{1}{4}x + 5$$

| | | | | | | | |
|---|----|----|---|---|---|---|---|
| x | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| y | | | | | | | |

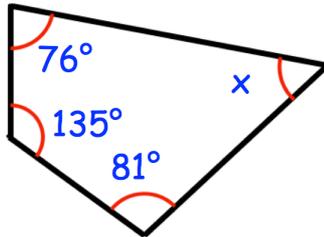


On the grid, draw the graph of

$$y = \frac{1}{4}x + 5$$



What type of correlation does this scatter graph show?



Find x

Three coffees cost £3.60.

What is the cost of twenty coffees?

Ramy has a spinner that has sections labelled 1 to 5.
He spins the spinner 10 times.

Here are his scores.

1 4 4 2 3
4 5 1 4 1

Work out the range.

Find the mode.

A rugby team can win, draw or lose a match.
The table shows the probabilities of each result.

Calculate the missing probability in the table.

| | | | |
|-------------|-----|------|------|
| Result | Win | Draw | Lose |
| Probability | 0.6 | | 0.25 |

The rugby team play 20 games.
Each win is worth 5 points.
Each draw is worth 2 point.
Each loss is worth 0 points.

Work out how many points the rugby team should receive in one season.



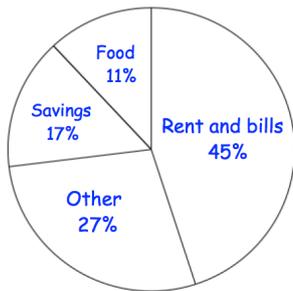
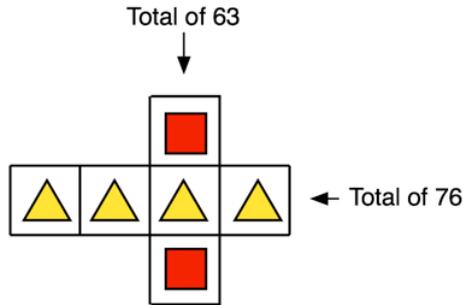
Arrange these numbers in order of size.
Start with the smallest number.

56% $\frac{11}{20}$ 0.52 $\frac{1}{2}$

Each shape represents a number.
Work out the value of each shape.

 =

 =



The pie chart shows information about how Mr. Jenkins spent his salary for July. He was paid £2000 in July. Work out how much Mr. Jenkins spent on rent and bills.

James is buying a table.
He finds the same table for sale in two different shops.

When buying the table, the rate of VAT was 20%

Table World
£140
Prices include VAT

Tables'R'us
£120
Prices do not include VAT

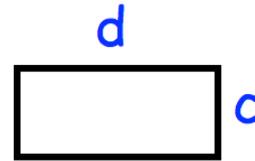
Which shop is better value?

The angles in a triangle are in the ratio 1 : 2 : 9

What is the size of the largest angle?



Find an expression for the perimeter of the rectangle.

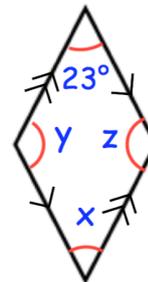


Amara is playing a game.
She throws 8 balls at a target, one at a time.
Each hit is worth 5 points.
Each miss is worth -4 points.
Amara hits the target with 2 of the balls and misses with the rest.



How many points does Amara score?

Shown is a rhombus.
Find angles x , y and z .

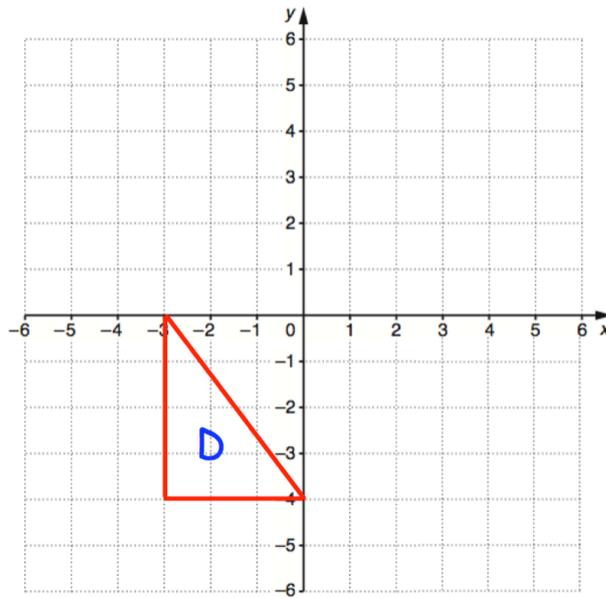


| | | | | | |
|-------------|------|------|------|-------|------|
| Day | Mon | Tues | Wed | Thurs | Fri |
| Temperature | -4°C | 1°C | -6°C | 1°C | -2°C |

What is the mean of the temperatures recorded?

The ratio of girls to boys in a class is 2 : 3
What fraction of the class are girls?

What percentage of the class are boys?

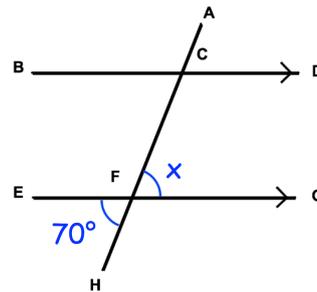


Reflect D in the y-axis

Work out

$$11 + 11 - 6^2 \div 2$$

Work out the size of the angle marked x.
Give a reason for your answer.



The ratio of red sweets to yellow sweets in a bag is 4 : 5

There are 240 red sweets in the bag.

How many sweets are there altogether in the bag?

22nd October

Foundation 5-a-day



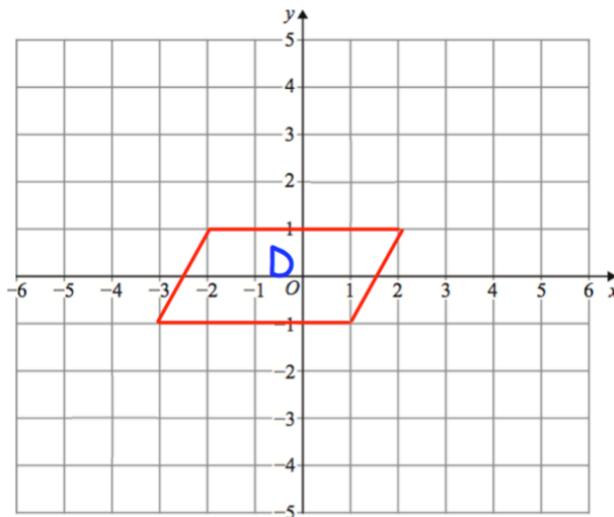
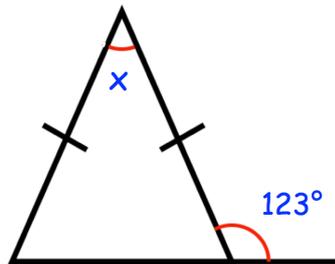
Corbettmαths

A vintage car was bought for £9,400
Since then the value of the car has
increased by 29%



Calculate the value of the car.

Find x



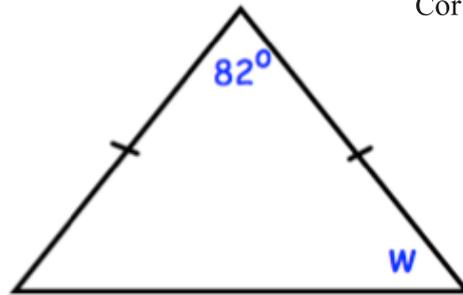
Translate shape D using translation vector $\begin{pmatrix} -3 \\ -2 \end{pmatrix}$

Ava and Sienna share some money in
ratio 2 : 7

Sienna gets £25 more than Ava.
How much does each girl receive?



Find w



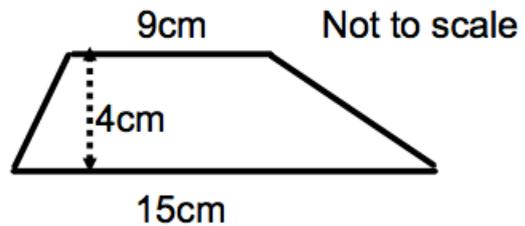
Here is a list of quadrilaterals.

- kite rectangle rhombus
 square parallelogram

For the following description, choose the correct name from the list.

All four sides are the same length.
 There are no right angles.

Calculate the area of the trapezium.



Ben rolls a dice and flips a coin.
 He could get a Tail and a 1 (T1).

Write a list of all the other possible outcomes.

Is time taken to read a book discrete or continuous data?

Discrete

Continuous

Give a reason for your answer.



55% students in a school have a locker.

There are 300 students in the school.

What fraction of students **do not** have a locker?

How many students have a locker?

Work out $\sqrt[3]{64}$

The distance between two cities is 2898 miles.

The plane journey took 6 hours.

Calculate the average speed of the plane.

Two fair six-sided dice are rolled.
The score is **difference** between the numbers on each dice.

Complete the table to show all possible scores.

| | | Dice 1 | | | | | |
|--------|---|--------|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| Dice 2 | 1 | 0 | 1 | | | | |
| | 2 | 1 | | | | | |
| | 3 | 2 | | | | | |
| | 4 | | | | | | |
| | 5 | | | | | | |
| | 6 | | | | | | |

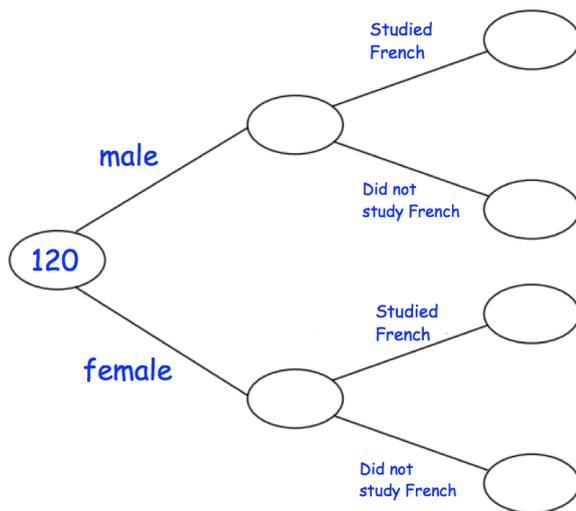
Find the probability of scoring a 2

Find the probability of scoring a number less than 3



Write 0.205 as a fraction

Write 0.205 as a percentage



There are 120 students in year 11.

45 of the students are female
27 of the male students studied French
18 of the female students did not study French

Complete the frequency tree

A student is picked at random.

Write down the probability that the student studies French.

$$\frac{3}{7} + \frac{1}{5}$$

$$\frac{3}{7} \times \frac{1}{5}$$

Which is better value for money?

0.9 grams of gold costs \$38.20

or

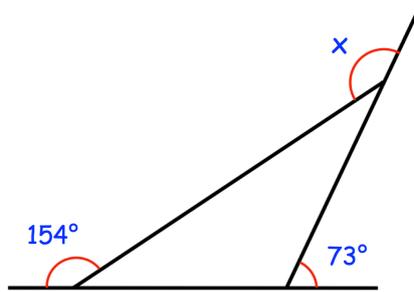
6.5 grams of gold for \$270



There are 14 children at a birthday party. There are 8 litres of lemonade at the beginning of the party. Each child drank 280 millilitres of lemonade.

How much lemonade is left?

Find the size of angle x



Ella takes part in an archery lesson For every 4 arrows fired, only 3 hit the target. Altogether Ella hit the target 24 times.

Work out how many arrows Ella fired.

Hannah is recording the number of letters in each word in an article.

These are the first ten lengths.

| | | | | |
|---|---|---|---|---|
| 3 | 4 | 2 | 6 | 2 |
| 4 | 3 | 7 | 3 | 6 |

Work out the mean.

The 11th word has 3 letters.

Tick the box which describes what affect this will have on the mean.

The mean will decrease

The mean will remain the same

The mean will increase



4 5 5 5 6 6 7 8 9 9

Find the range.

Write down the mode.

Find the median.

Marcel has three times as many marbles as Klaudia.
Tomas has four times as many marbles as Klaudia.

Marcel has 12 marbles.

How many marbles does Tomas have?

Finley is saving money towards a new motorbike that costs £4,000.
He saves £50 each month.

Work out what fraction of the total cost he saved over the first year of saving.
Give your answer in its simplest form.

The input is the same as the output.

Find the input.

Expand $2(3w - 5y)$ Expand $2w(3w^2 - 5)$



William is y years old.

Eoin is four years older than William.

Write an expression for Eoin's age.

Three consecutive numbers have a **sum** of 21.

What are the three numbers?

3 9 11 33

Find the range.

Find the median.

Joshua drives 180km.

It takes 2 hours 30 minutes.

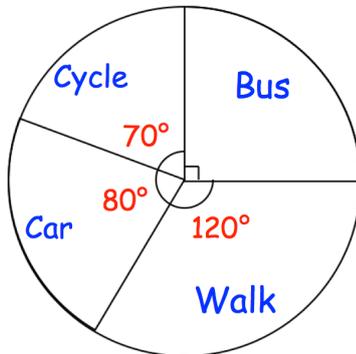
Work out his speed.

Write down the n th term for this sequence

11 8 5 2

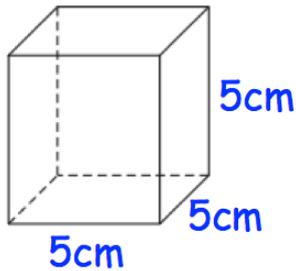


The pie charts shows how a group of students travel to school.



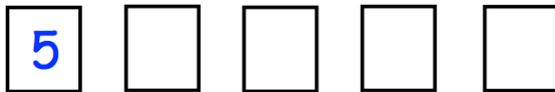
What is the most popular method for students to travel to school?

What fraction of students walk to school?



Work out the surface area of the cube.
State the units of your answer.

Shown below are five cards which are arranged in order from smallest to largest



The range of the cards is 9.
The median of the cards is 10.
The mean of the cards is 9.
Work out the 4 missing numbers.

Jack has some coins

2p 5p 10p 20p 50p £1 £2

He gives two coins to Andrew.

One coin is 20% of the other.

List all the possible pairs of coins Jack could give Andrew.



Amie sells cars.

She is paid £9 an hour and is paid a £50 bonus for each car sold.

One week, Amie worked for 6 hours and sold 3 cars.

How much was her pay?



The next week, Amie was paid £295.

How many hours did she work and how many cars did she sell?

Hours _____ Cars _____

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 | | | | | |
| | x | 1 | 2 | 3 | 4 | 5 | 6 |
| Dice 2 | 1 | | | | | | |
| | 2 | | | | | | |
| | 3 | | | | | | |
| | 4 | | | | | | |
| | 5 | | | | | | |
| | 6 | | | | | | |

Find the probability of a score of 8

Find the probability of a score of 8 or more

14 17 20 23

Work out the nth term and 100th term

31st October

Foundation 5-a-day

A blue light flashes every 6 seconds.
A green light flashes every 8 seconds.

They have both flashed at the same time.

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

Put brackets in the following statement to make it true.

$$4 + 3 \times 7 - 1 = 42$$

Alisha buys 200 books costing £3 each.

She sells $\frac{2}{5}$ of the books at £8 each.

Alisha then reduces the price of the remaining books by 25%.

She then sells some of the remaining books.

Alisha makes £490 profit.

Work out how many books Alisha did **not** sell.

Write down the equation of the line shown.

