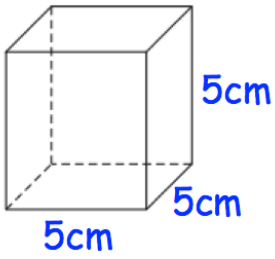
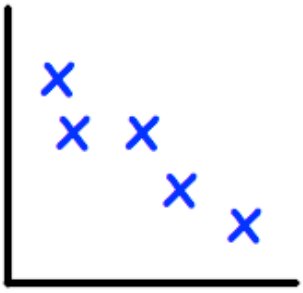
Name: _____ 5-a-day Foundation

1st January

Corbettmaths



Work out the volume of the cube.
State the units of your answer.



What type of correlation is shown?

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

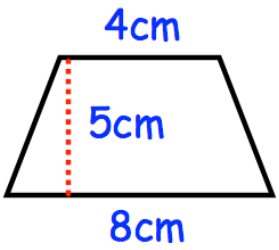
$\frac{3}{4} + \frac{4}{7}$

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

A jar contains 150g of sugar.

How many grams of strawberries are in the jar?

How many grams of jam are in the jar?



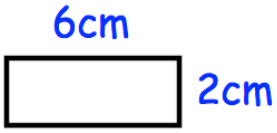
Calculate the area of the trapezium

Name: _____ 5-a-day Foundation

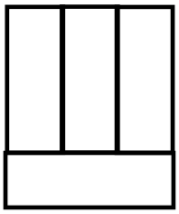
2nd January

Corbettmaths

Write 50cm as a fraction of 2m
Give your answer in its simplest form



Four rectangles identical to the one above are arranged.



What is the perimeter?

Find the highest common factor of 30 and 18

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

The median is 5
The mode is 3
The range is 8
All numbers are odd.

Write down a possible set of numbers James could have.

The ratio of boys to girls in year 7 is 2:3

There are 40 boys in year 7, how many girls are there?

Name: _____ 5-a-day Foundation

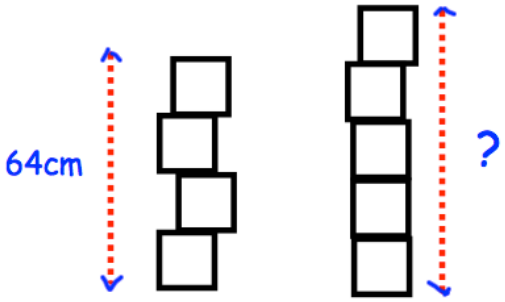
3rd January

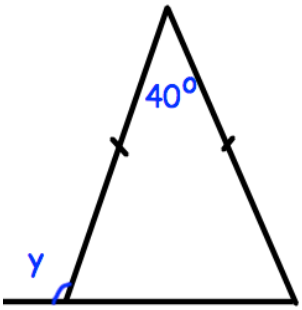
Corbettmaths

Write down an algebraic expression for

p multiplied by m

3 less than p





Find y

Simplify

$m^6 \times m^2$

Simplify

$\frac{m^{10}}{m^2}$

Age	Frequency
7	3
8	5
9	2

Work out the mean

Name: _____ 5-a-day Foundation

4th January

Corbettmaths

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

60% $\frac{1}{2}$ 0.3 $\frac{3}{4}$ 0.4

Simplify 4x + 3y - 2x + 5y

If £1 is $1.50

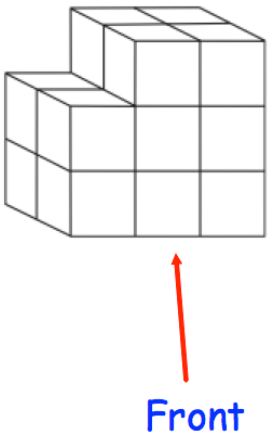
Change £4 into dollars.

Change £100 into dollars.

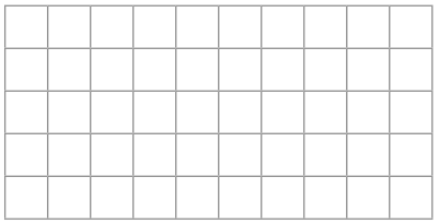
Change $4.50 into pounds.

Change $30 into pounds.

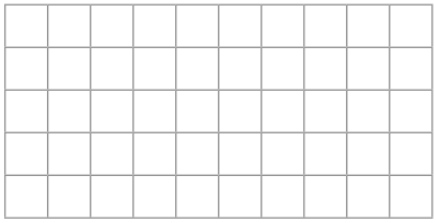
The diagram below shows a shape made with centimetre cubes.



On the centimetre square grid, draw the front elevation.



On the centimetre square grid, draw the side elevation.



Name: _____ 5-a-day Foundation

5th January

Corbettmaths

Each member of a club is going to receive a badge.
There are 140 members.

The badges are sold in packs of 9.

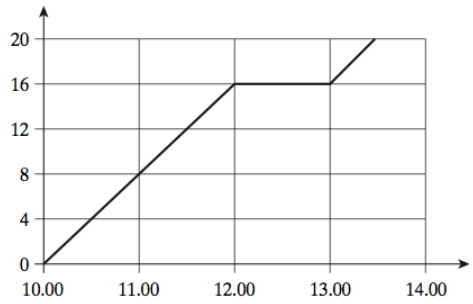
Work out the least number of packs of badges that need to be bought.

$\frac{2}{7} \times \frac{1}{3}$

$\frac{4}{7} \div \frac{4}{5}$

Work out

12^4



The graph shows the distance (in miles) from home at each time.

How far was Nicky from home at 11:30?

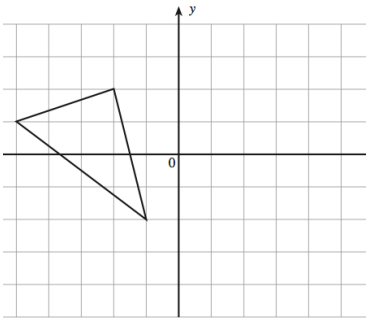
What happened between 12:00 and 13:00

Work out the speed between 10:00 and 12:00

Name: _____ 5-a-day Foundation

6th January

Corbettmaths



Reflect the triangle in the y-axis.

Molly visits a restaurant.
She chooses one starter and one main.

Starters	Mains
Soup	Chicken
Prawn Cocktail	Beef
Melon	Pizza

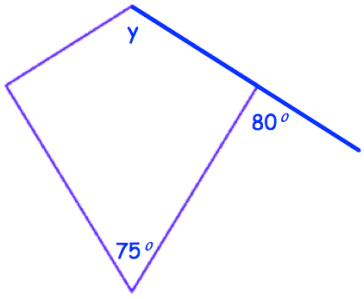
List all the possible outcomes.

Here are 10 scores

1 4 4 2 3
4 5 1 4 1

Find the mode

Find the median



Shown is a kite
Calculate the size of angle y.

Expand

$y(3y + 2)$

Factorise

$x^2 - 5x$

Name: _____ 5-a-day Foundation

7th January

Corbettmaths

	Wins	Draws	Losses
Sunderland City	1	5	3
Manchester Rovers	2	1	6
Liverpool United	3	0	6
London Town	0	9	0

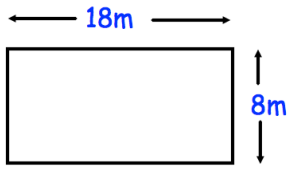
Win = 3 points Draw = 1 point
Loss = 0 points

Which team has the least number of points?

How many points do they have?

Work out $5.18 \div 7$

Work out 0.8×1.2



Not drawn to scale

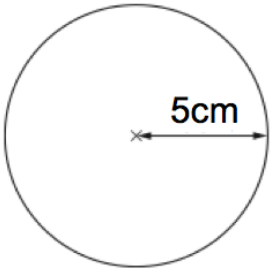
Mrs Jenkins is a chicken farmer.
Her chicken pen is 18m long and 8m wide.
Each chicken requires at least $3m^2$.

What is the maximum number of chickens Mrs Jenkins can keep?

Solve $2(4x - 1) = 18$

Work out the area of the circle.

State the units for your answer.
Give your answer to 2 decimal place.

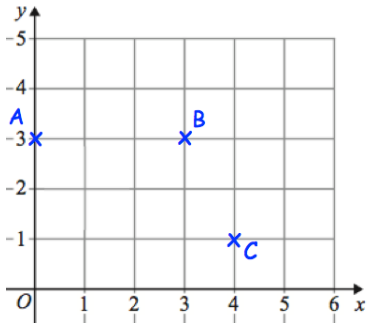


Name: _____ 5-a-day Foundation

8th January

Corbettmaths

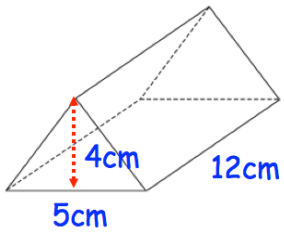
Write 0.4 as a fraction



ABCD is a parallelogram.
Complete the parallelogram and write down the coordinates of D.

(..... , ...)

Increase 40 miles by 43%



Find the volume of the prism.

The probability of winning a game is 0.3.

Jayne plays the game 200 times.

How many times should she lose the game?

Name: _____ 5-a-day Foundation

9th January

Corbettmaths

124 120 116 112

What are the next two terms?

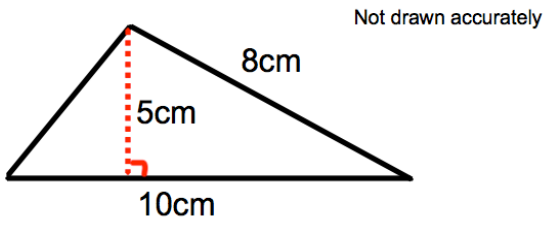
What is the tenth term?

Solve 3y + 4 = 22

Mary has £400

She gives 10% to her sister.
She gives two fifths to her mum.

How much does she have left?



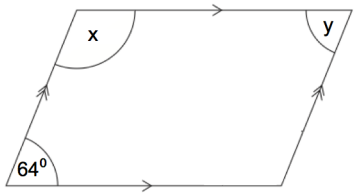
Calculate the area of the triangle.

Write 36 as a product of primes.
Give your answer in index form.

Name: _____ 5-a-day Foundation

10th January

Corbettmaths

Write 40% as a fraction	Write 15% as a fraction
A car travels 100 miles in 4 hours. What is its average speed?	
 The diagram above shows a parallelogram.	Work out the size of angle x. Work out the size of angle y.
Calculate the nth term 6 , 11, 16, 21, 26, ...	Using the nth term, calculate the 100th term in the sequence
Here are 4 expressions. gh g + h g – h $g^2 + h^2$ If g = 10 and h = –2 arrange the expressions in order, smallest to largest.	

Name: _____ 5-a-day Foundation

11th January

Corbettmaths

Shown is information about the number of phone calls received.

Student	Frequency
Patrick	12
Andrew	20
David	6
George	9

What is the range of the number of phone calls received?

Show this information on a pictogram

Patrick	
Andrew	
David	
George	

Key:

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

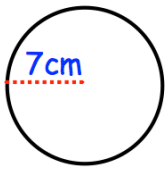
Simplify

$m^6 \times m^2$

Simplify

$m^6 \div m^2$

Calculate the circumference of this circle. Give your answer to 2 decimal places



Name: _____ 5-a-day Foundation

12th January

Corbettmaths

A ten sided dice, numbered 1 to 10 is rolled.

What is the probability of a 3?

What is the probability of a number less than 4?

What is the probability of a square number?

Work out 3a + 2c when a = 4 and c = –2

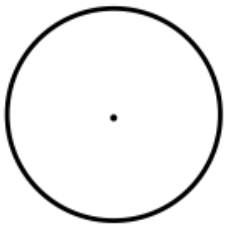
Max thinks of a number.

He squares it.
Then he adds 4.

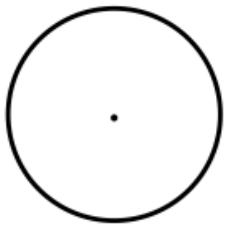
His answer is 53.

What was the number he thought of?

Draw a radius on the circle.



Draw a chord on the circle.



Factorise

$3y + 15$

Factorise

$a^2 + 3a$

Name: _____ 5-a-day Foundation

13th January

Corbettmaths

Simplify

a + a + a + a

Simplify

4a + 8c + 5a - 3c

Each unit of gas costs 30p

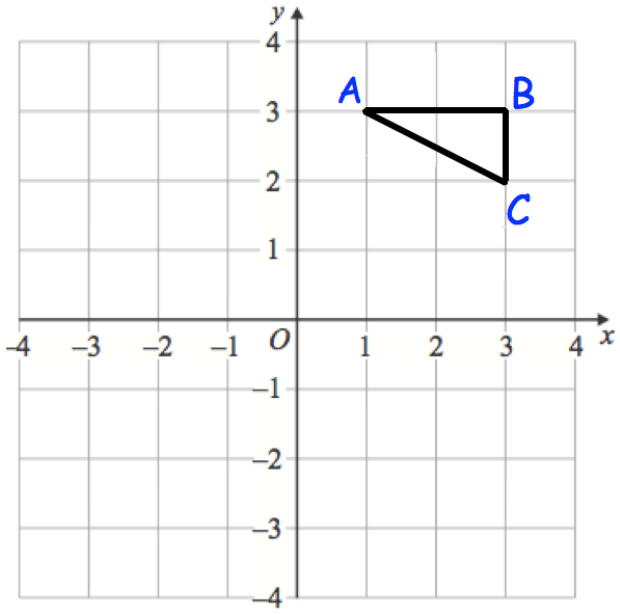
How much was spent on gas between January and June?

	meter reading
Jan	2350
June	2413

Solve

$\frac{c}{2} + 3 = 10$

Solve 2e - 8 = 14



Rotate triangle ABC 90° anticlockwise about centre (0, 0)

Name: _____ 5-a-day Foundation

14th January

Corbettmaths

Write $\frac{21}{5}$ as a mixed number.

Write $1\frac{2}{3}$ as a top heavy fraction.

Jonah wants to draw a pie chart

Sunderland City	6
Manchester Rovers	7
Liverpool United	13
London Town	10

Calculate the size of each angle.

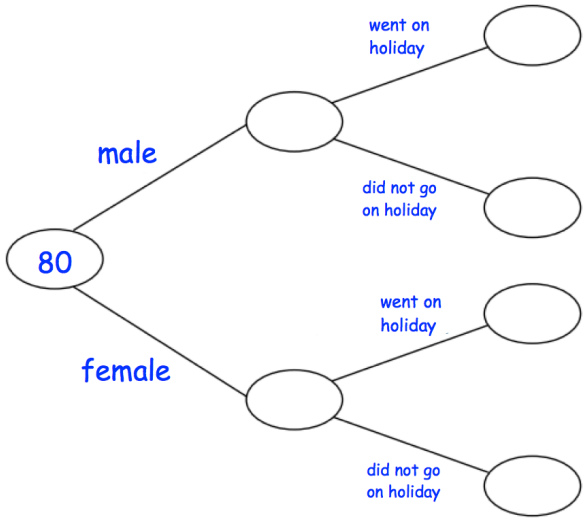
Mr James gives £500 to his children Ally, Barry and Cat in the ratio 2:3:5.

How much do they each receive?

A school has 80 teachers.

44 of the teachers are female
11 of the male teachers went on holiday
20 of the female teachers did not go on holiday.

Complete the frequency tree



Name: _____ 5-a-day Foundation

15th January

Corbettmaths

When x = 5 and y = - 7

Find the value of 5xy

£1 = $1.5 dollars

Convert £20 into dollars

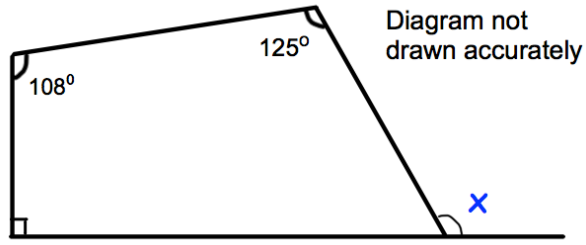
Convert $450 into pounds

Adults £4 each
Children £3 each

A group of adults and children goes to the fair.

The total cost is £32

Give a possible number of adults and children.



Work out the size of the angle x.

2400 men and 600 women attend a rugby match.

30% of the people support Bath
¼ of the men support Bath.

What percentage of the women support Bath?

Name: _____ 5-a-day Foundation

16th January

Corbettmaths

Draw the graph x + y = 3

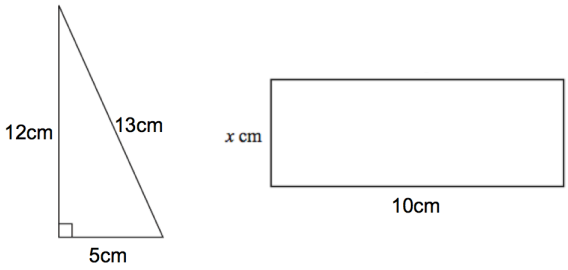
Draw the graph y = 5

A coach seats 52 people.

250 people want to go on holiday.

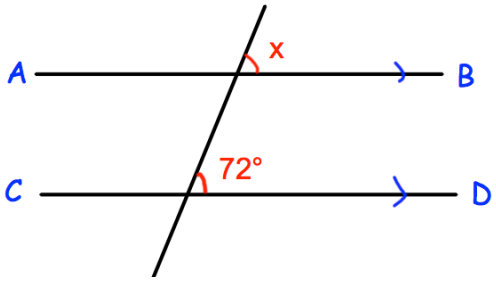
How many coaches are needed?

How many empty seats will there be?



The area of the triangle and the rectangle are equal.

Find x.



Work out the size of the angle marked x.

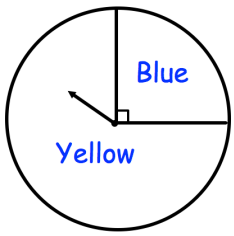
Give a reason for your answer.

Name: _____ 5-a-day Foundation

17th January

Corbettmaths

The diagram shows a fair spinner.



Mark the scale with an arrow to show the probability of landing on yellow.

Alison has £1.40
Scott has £2.90

How much should Scott give Alison so that they will have the same amount of money?

Here are the first five terms in a number sequence.

7 10 13 16 19

Write an expression, in terms of *n*, for the *n*th term of this number sequence.

Fiona 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 –3 points.

Fiona hits the target with 5 of the balls and misses with the rest.

How many points does Fiona score?

Chris also throws 8 balls at the target.
His final score is 0.

How many times does he hit the target?

Name: _____ 5-a-day Foundation

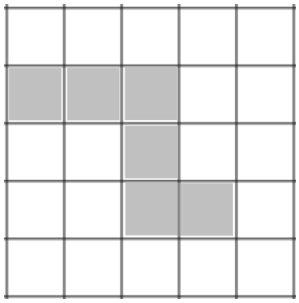
18th January

Corbettmaths

Complete the table

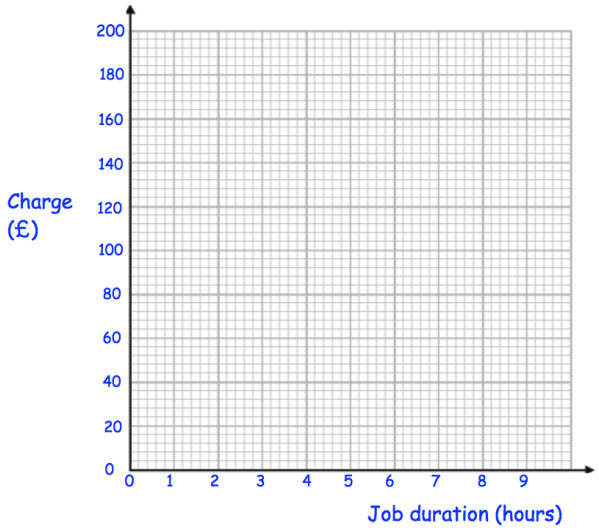
Fraction	Decimal	Percentage
$\frac{7}{100}$	0.07	
	0.35	35%
$\frac{3}{5}$		60%

Shade one more square to make a pattern with rotational symmetry order 2.



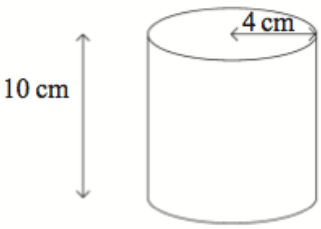
Plot the data on the scatter graph

Job duration (hours)	1	2	3	3	5	6	6
Charge (£)	60	80	104	116	128	140	160



Describe the correlation

Calculate the volume of this cylinder



Name: _____ 5-a-day Foundation

19th January

Corbettmaths

6 x -4

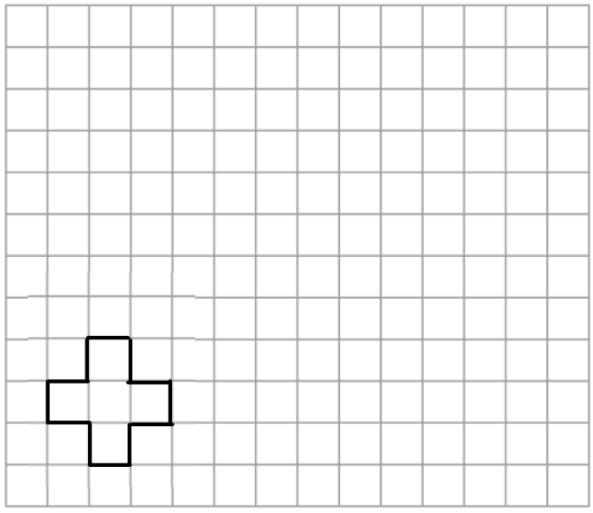
-7 x -4

From the list of numbers

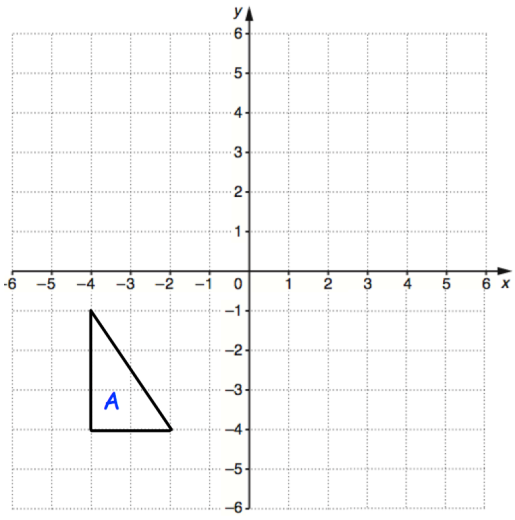
3 6 8 14 16
28 41 64

write down the cube numbers

write down the cube root of 27.



Enlarge the shape by scale factor 3



Reflect triangle A in the x-axis.

Make *w* the subject of the formula

$y = 3w - a$

Name: _____ 5-a-day Foundation

20th January

Corbettmaths

Work out the mean:

5 9 3 5

Sophie buys a caravan for £8000

She pays a deposit of £3000 and then pays the rest over 20 equal monthly payments.

How much is each monthly payment?

Martin is x years old.
Jennifer is 3 years younger than Martin.

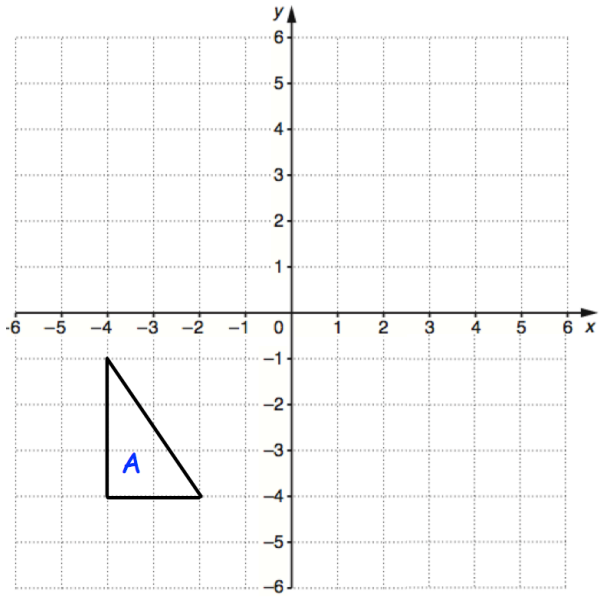
Write an expression for Jennifer's age.

Connor is twice as old as Martin.

Write an expression for Martin's age.

Increase £60 by 30%

Reflect triangle A in the y-axis

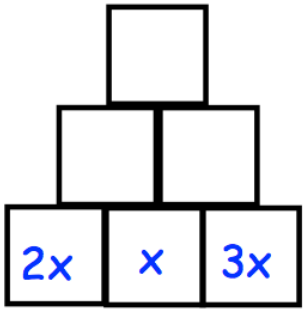


Name: _____ 5-a-day Foundation

21st January

Corbettmaths

The contents of each box can be found by adding the two boxes directly beneath it.



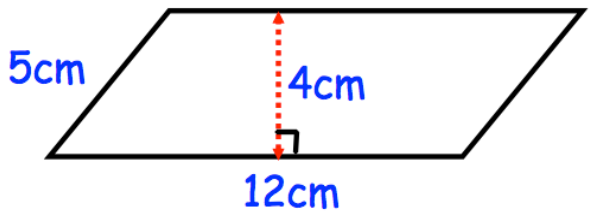
Share £1200 in the ratio 2:3

Complete the table

	Exactly 1 line of symmetry	Rotational symmetry of order 2
Rectangle	X	✓
Square		
Kite		
Rhombus		

Barry earns £1300 a month. He spends 30% of this money on rent and 12% on bills.

How much of the £1300 has he left?

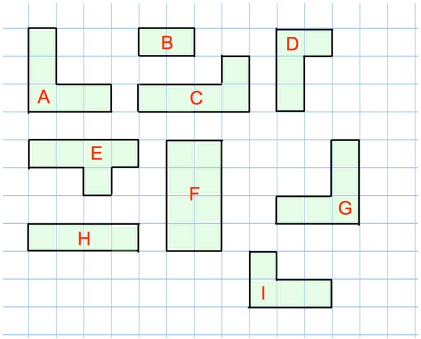


Calculate the area of this parallelogram.

Name: _____ 5-a-day Foundation

22nd January

Corbettmaths



Find a shape that is mathematically similar to B

Express 20p as a fraction of £5

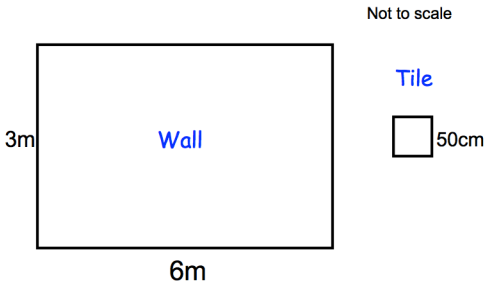
Write 0.065 as a fraction

There are only blue and red sweets in a bag.
The ratio of blue sweets to red sweets is 5:3

What fraction of the sweets are red?

Fiona drives for 4 hours.
Her average speed is 25.5 mph.

How far does Fiona drive?



Mollie is tiling her bathroom wall.
The wall is 6m by 3m.
Each square tile is 50cm by 50cm.
Each tile cost £4.

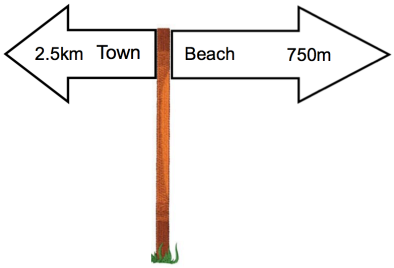
Calculate the cost of tiling the wall.

Name: _____ 5-a-day Foundation

23rd January

Corbettmaths

Work out 0.3 x 0.7



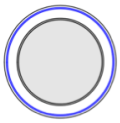
Work out the distance between the town and the beach.

State your units.

The same type of dinner plate is sold in two different packs.

Small pack
Contents
3 plates

£5.25



Large pack
Contents
12 plates

£21.24

Which is better value for money?

Share $40 in the ratio 2:3

Factorise 15y + 20

Name: _____ 5-a-day Foundation

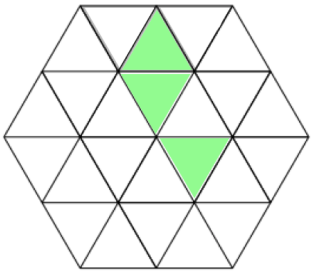
24th January

Corbettmaths

Simplify a + a + a

Simplify 4ac + 5ac

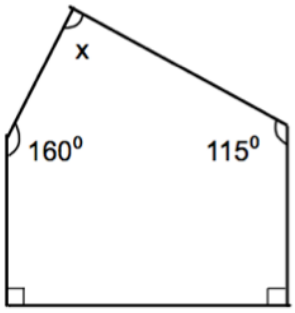
Shade 3 more triangles to make a pattern with rotational symmetry order 3.



A theatre has 52 rows of seats.
Each row has 19 seats.

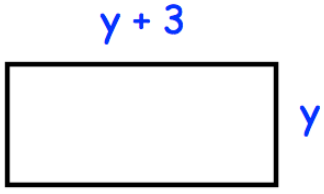
Tickets cost £9.75 each.
All tickets are sold for a show.

Estimate how much money is raised.



Work out x.

Write an expression, in terms of y, for the perimeter of the rectangle.



Name: _____ 5-a-day Foundation

25th January

Corbettmaths

Max earns £220 per week.

He is given an increase of 10%.

What is his new salary?

	French	German
Male	14	
Female		8

There are twice as many boys studying French than girls.

The total number of students is 50.

Find the missing numbers.

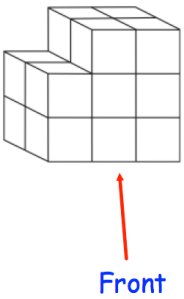
If 15 x 34 = 510

Use that information to work out:

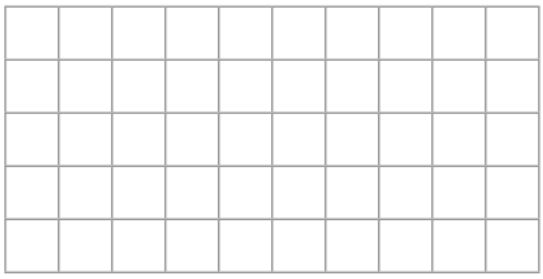
150 x 34

30 x 34

1.5 x 34



Draw the front elevation.



Simplify 7w - 2w

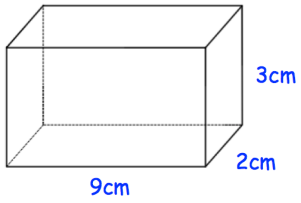
Simplify 7h + 5k + h - 3k

Name: _____ 5-a-day Foundation

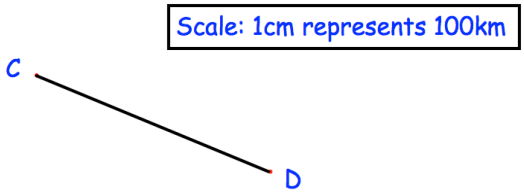
26th January

Corbettmaths

Solve $\frac{x}{2} - 3 = 7$



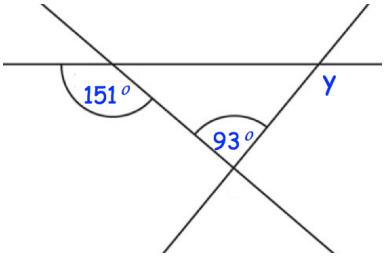
Work out the volume of the cuboid.



Calculate the actual distance from C to D

The weight of a 2p coin is 7g.

Find the weight of £8 worth of 2p coins.
Give your answer in kilograms.



Above are 3 straight lines.

Find the size of angle y.

Name: _____ 5-a-day Foundation

27th January

Corbettmaths

2 4 3 4 8 1 14

What is the median?

What is the mode?

Anna has a mobile phone.

Text messages cost 3p each.
Calls cost 5p per minute.

She also has to pay £10 each month.

In September, Anna:

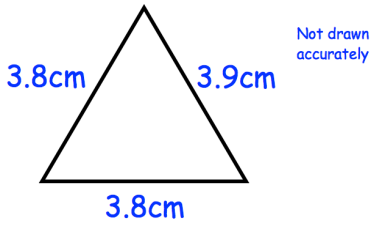
- made 100 minutes of calls
- sent 70 text messages.

How much was her bill in September?

In the grid, each row adds up to the number to the right.

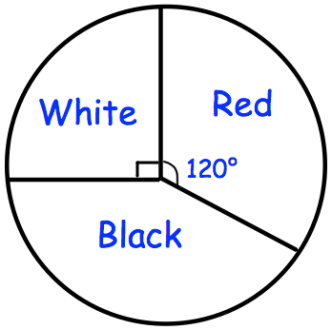
Find the values of w, x, y and z.

w	w	w	w	20
w	w	x	x	24
w	x	x	y	25
w	x	y	z	30



Write down the type of triangle shown.

Work out the perimeter of the triangle.



The pie chart shows the colours of counters in a bag.
There are 48 counters in total.

How many are red?

Name: _____ 5-a-day Foundation

28th January

Corbettmaths

$2 \times \square = -16$

$\square \times -7 = 42$

Foxtown			
52	Sandcliff		
70	32	Red Island	
31	14	28	Donhampton

The table shows the distances in miles by road between some towns.

Which two towns are the furthest apart?

Solve $x + 5 = 7$

Solve $2w - 1 = 13$

A red light flashes every 4 seconds.

A blue light flashes every 9 seconds.

They have both just flashed at the same time.

How long until they both flash again at the same time?

Multiply out $x(x + 3)$

Expand $3(2y - 1)$

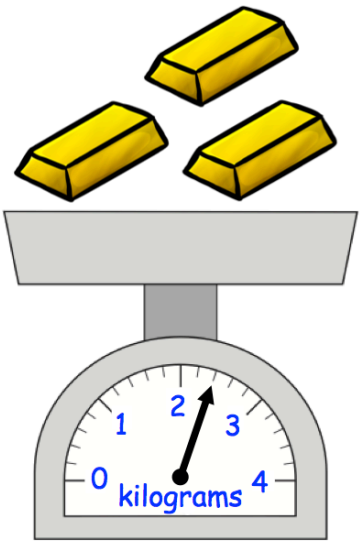
Name: _____ 5-a-day Foundation

29th January

Corbettmaths

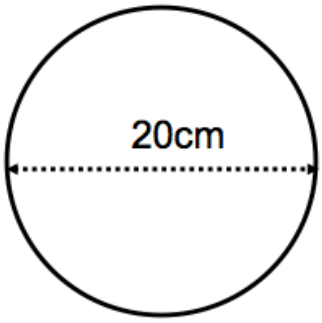
Three identical gold bars are placed on a set of scales.

Work out the weight of one bar of gold.
Include units.



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

$\frac{3}{5} - \frac{2}{7}$



Work out the area of the circle.

Expand 4(y + 2)

Expand y(y + 8)

Name: _____ 5-a-day Foundation

30th January

Corbettmaths

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

$\frac{7}{10}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{3}{5}$

Simplify

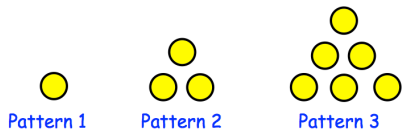
$w^7 \times w^4$

Simplify

$w^7 \div w^4$

	French	German	Spanish	Total
Female			7	
Male	5	2		
Total	14	9		40

The pattern below show the first 3 triangular numbers.



Write down the first 5 triangular numbers.

Work out

$(-2)^3$

Name: _____ 5-a-day Foundation

31st January

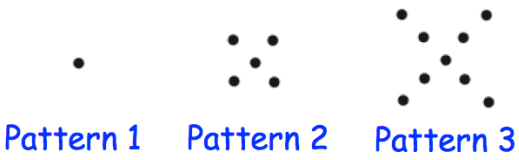
Corbettmaths

There are 24 students in Michael's class.

A third of the class **cycle** to school.
Three eighths of the class **walk**.
The rest of the class travel by **bus**.

How many students travel by bus?

Write 94 out of 200 as a percentage.



How many dots will there be in Pattern 6?

Mia has five numbered cards.

One of these cards is chosen at random.

Mia says:
The probability of an odd number is ⅗
The probability of a 7 is ⅖
The range of the numbers is 10
The probability of a 2 is 0.

Fill in three numbers that could be on Mia's cards

7		5		

Work out 130% of 600

Work out 225% of 40