

**1st October** 10^4

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Work out the highest common factor (HCF)
of 24 and 36

Charlie's password is made up of six
different digits.

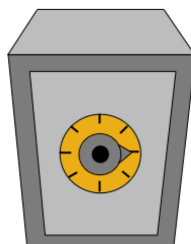
He remembers it as three 2-digit numbers.

The first 2-digits is a square number
between 10 and 30.

The second 2-digits is a prime number
between 30 and 40.

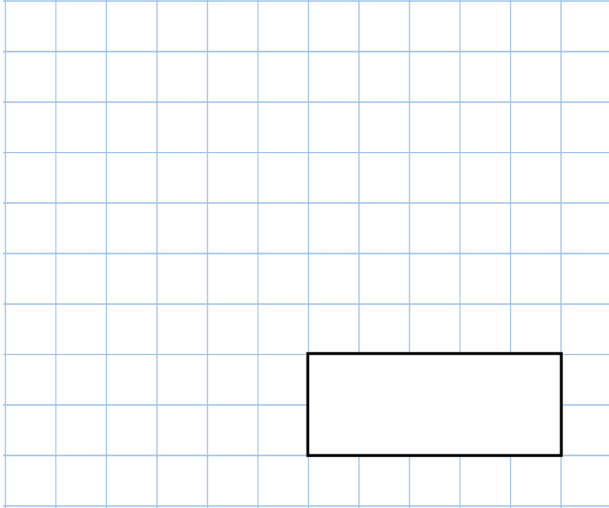
The third 2-digits is a cube number
between 10-99

List all his possible passwords

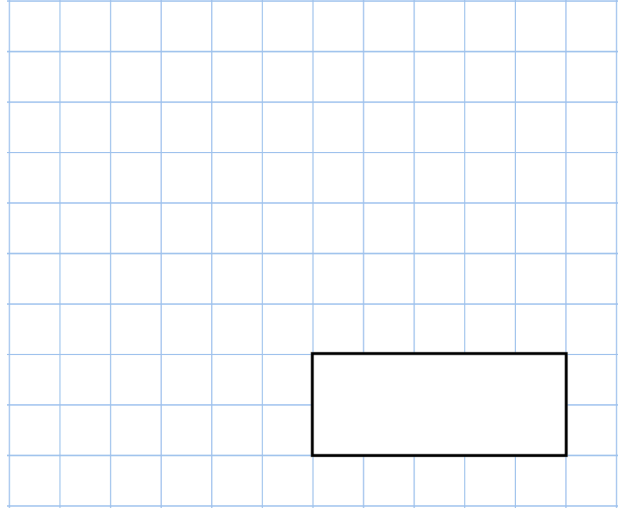


**2nd October**

$$\square^2 + 1,600 = 50^2$$



$$7,014 \div 14$$



In 2018, a Zoo had 520,000 visitors.

30% of the people visited in July.

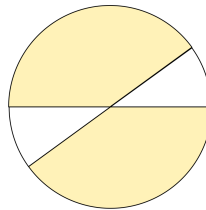
35% of the people visited in August.

How many people visited the Zoo in the rest of the year?

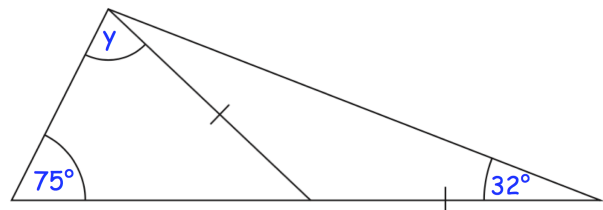
In this circle, each shaded part is $\frac{2}{5}$ of the area of the circle.

The two white parts have the same area.

What fraction of the circle is **one** of the white areas?

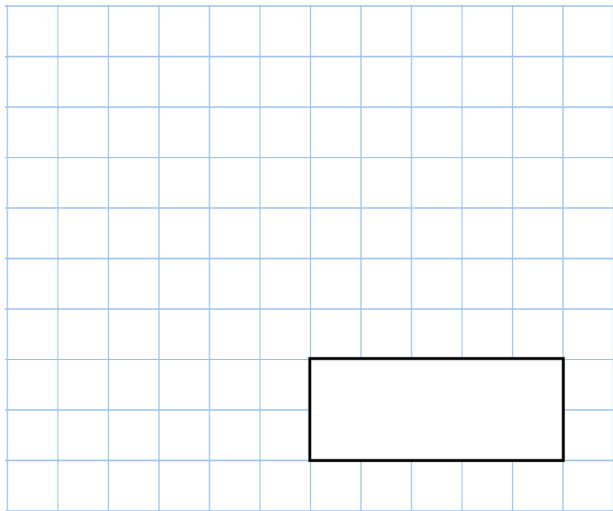


Find the size of angle y

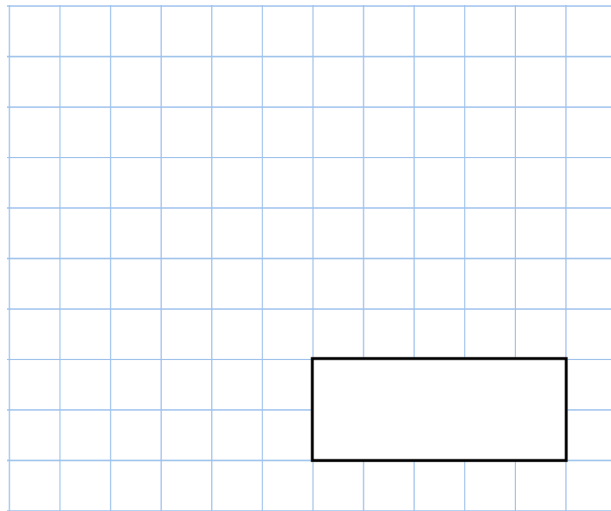


**7th October**

$$76 \times 2.3$$

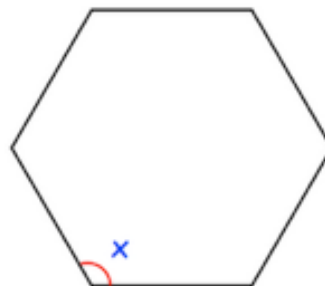


$$15\% \times 680$$



Here is a regular hexagon

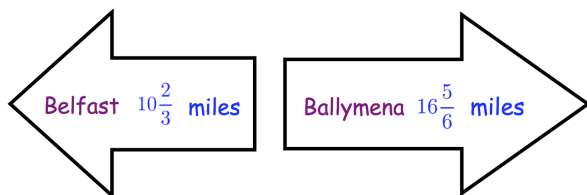
Find the size of each angle



Chloe is building a fence for her garden.

The fence costs £9.25 per metre to build.
The fence is 16 metres long.

Work out the total cost of building the fence



Work out the distance from Belfast to Ballymena.

**8th October**

$$\frac{6}{11} \div 2$$

4 9 | 1 8 1 3

$$w + 8 = 13$$

Work out the value of **w**

This graph can be used to change between miles and kilometres.



Change 10 miles into kilometres

Change 40 kilometres into miles

**9th October**

$$9^3$$

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$$\begin{array}{r} 1654 \\ \times \quad 26 \\ \hline \end{array}$$

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There are 1625 sweets in a tub.
A group of friends share the sweets.

Each person gets 65 sweets.

How many friends are there?



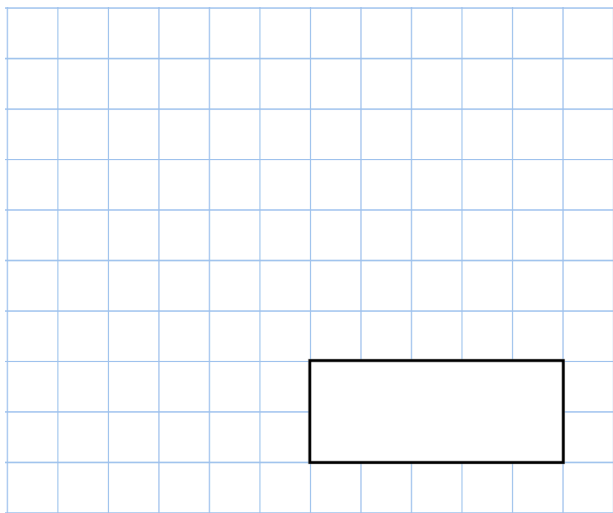
Write $\frac{1}{8}$ as a decimal

For every three 50p coins, Cain has two 20p coins.
Cain has £40 in 20p coins.

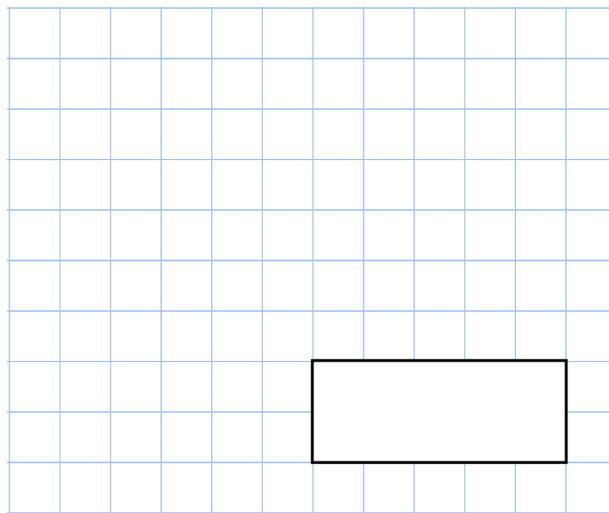
How much money does Cain have altogether?

**11th October**

$$627 \times 48$$

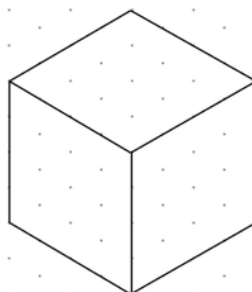


$$-15 - 16$$



Here is a drawing of a cube on an isometric grid.

Draw a cuboid that has the **same** volume of the cube.



Here are five number cards.

The mean of the numbers on the five cards is 12.

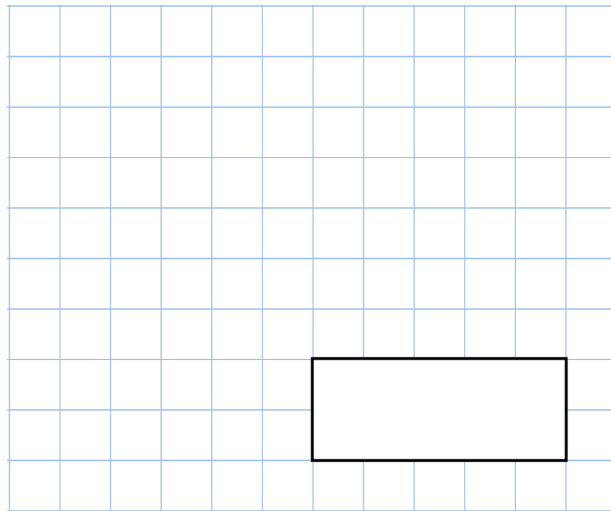
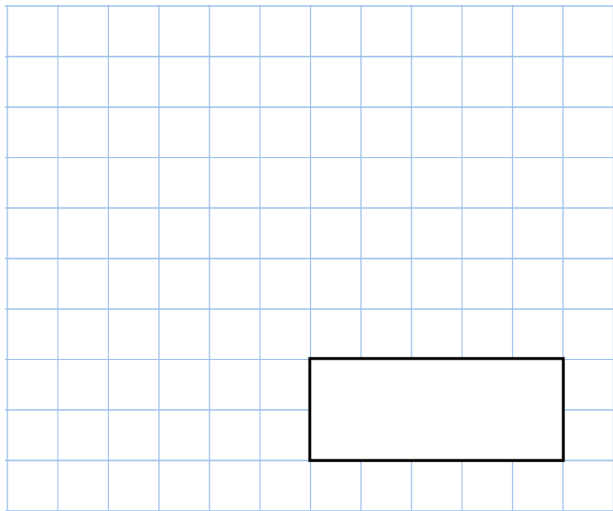
| | | | | |
|----|---|----|---|--|
| 13 | 5 | 18 | 2 | |
|----|---|----|---|--|

Work out the missing number

**13th October**

$$\frac{\square}{\square} = 0.\dot{3}$$

$$12 + 8 \times 13 + 7$$

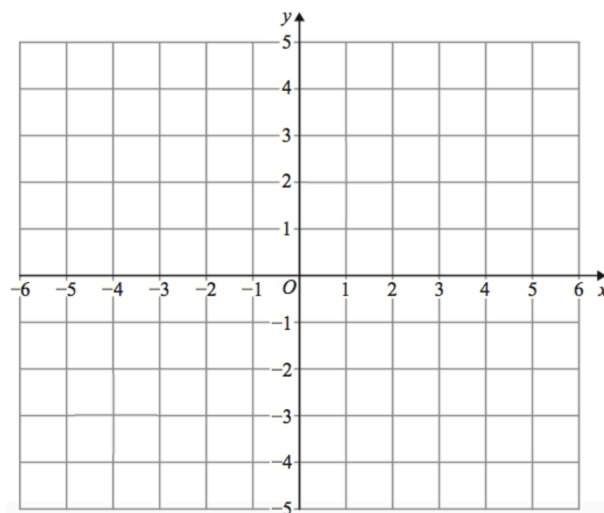


Raheem draws an isosceles triangle on the grid.

Two of the points are

$(3, -1)$ $(-2, -2)$

Draw the triangle on the grid



Reflect your triangle in the x-axis.

The cost of making a book can be found using this rule

$$\text{Cost} = \text{number of pages} \times 5\text{p} + 45\text{p for the cover}$$

A book costs £6.05

How many pages does that book have?



14th October

$$15\% \times 5,000$$

A 10x10 grid of squares. A black rectangle is drawn in the bottom right corner, spanning 4 squares horizontally and 2 squares vertically. The rectangle is located in the bottom-right quadrant of the grid, specifically covering the area from the 6th column to the 10th column and the 8th row to the 10th row.

$$2\frac{1}{2} \times 47$$

A cake has a mass of 600g.
36% of the cake is sugar.

How many grams of sugar are in the cake?



The letters **a**, **b**, **c** and **d** stand for numbers.

The sum of each row is given

| | | | | |
|---|---|---|---|----|
| a | a | a | a | 24 |
| a | a | b | b | 28 |
| b | c | c | c | 29 |
| a | b | c | d | 31 |

Find the values of **a**, **b**, **c** and **d**

a =

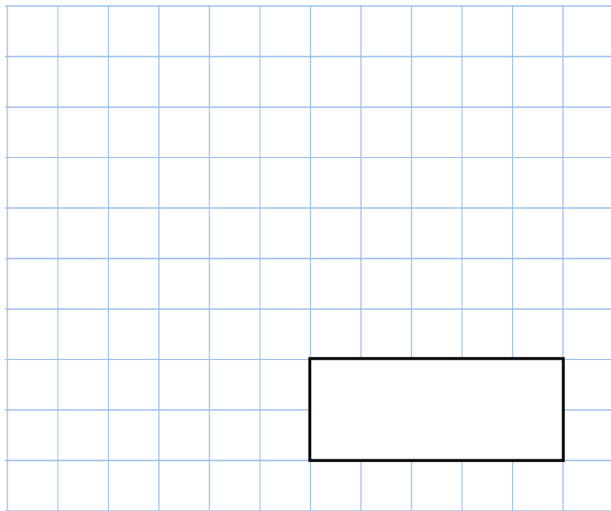
b =

C =

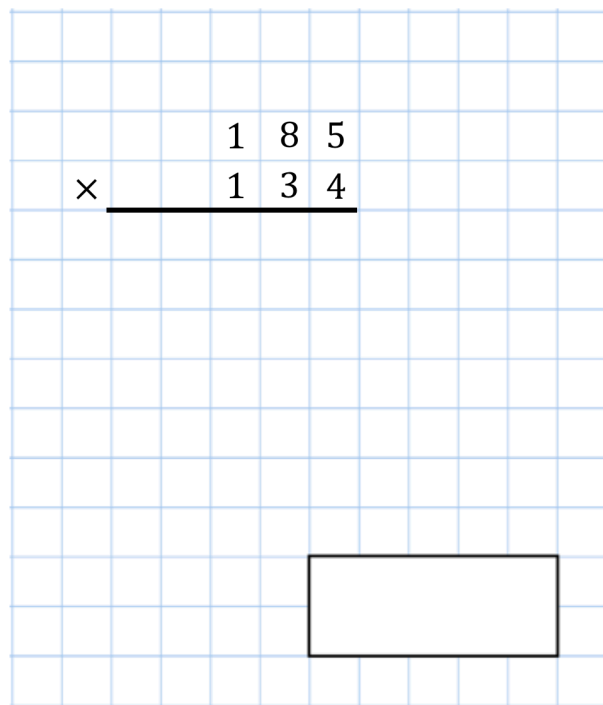
d =

**15th October**

$$0.08 \times 500$$

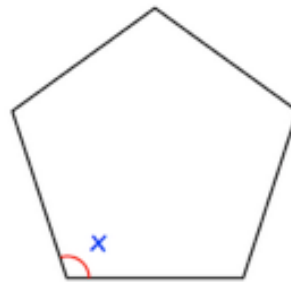


$$\begin{array}{r} 185 \\ \times 134 \\ \hline \end{array}$$



Here is a regular pentagon.

Find the size of each angle

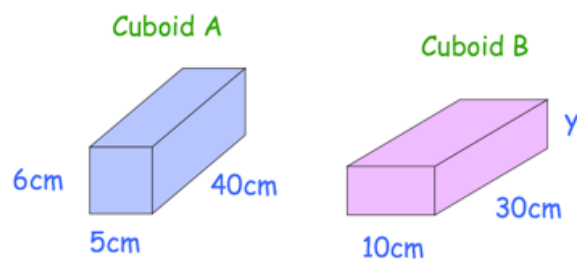


$$n = 18$$

What is $20n + 70$?

Cuboid A and Cuboid B have the same volume.

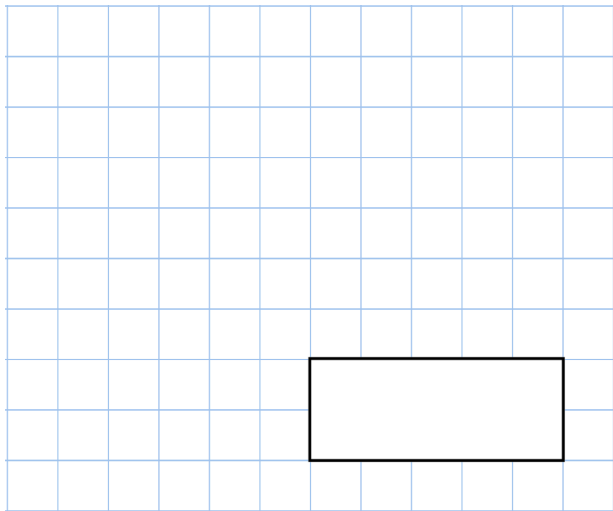
Find the height of cuboid B.



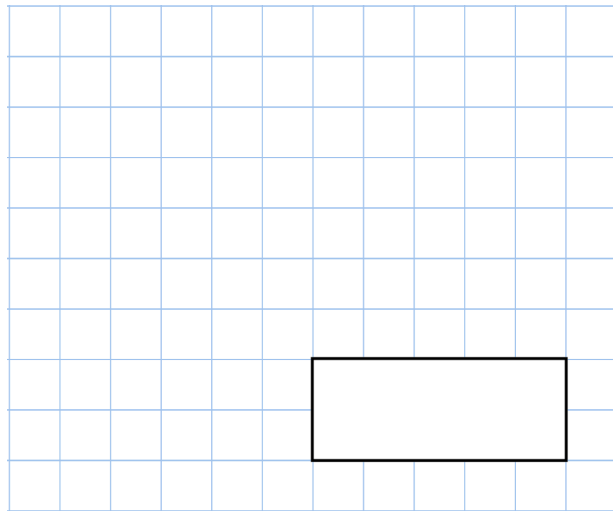


18th October

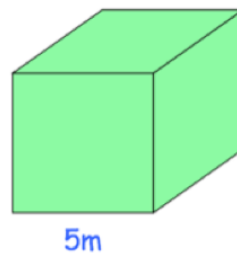
$$120 - 30 \div 6$$



$$3,914 \times 27$$



Work out the volume of this cube.



Find three different prime numbers with a sum of 43

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|----------------------|---|----------------------|---|----------------------|---|
| <input type="text"/> | + | <input type="text"/> | + | <input type="text"/> | : |
| prime number | | prime number | | prime number | |

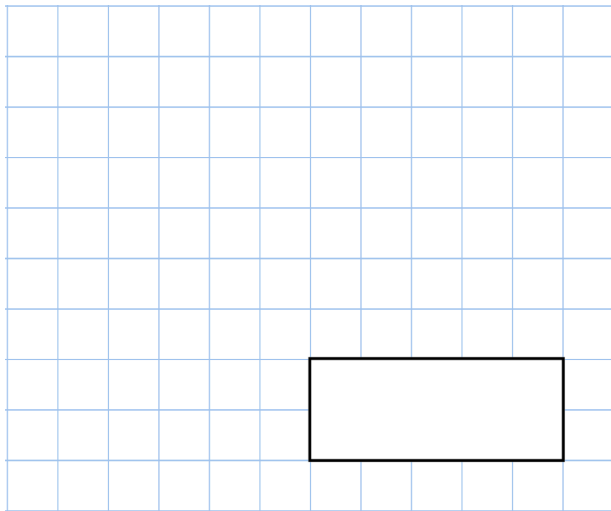


Write the year MMXVI in figures

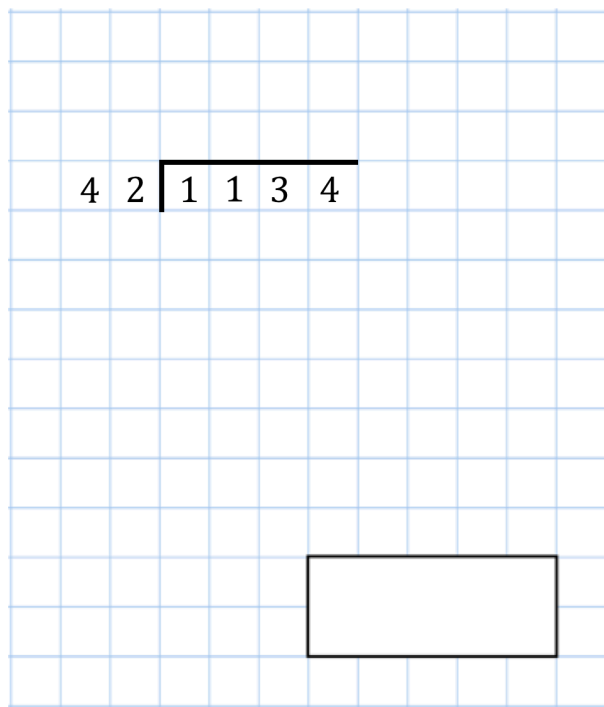


19th October

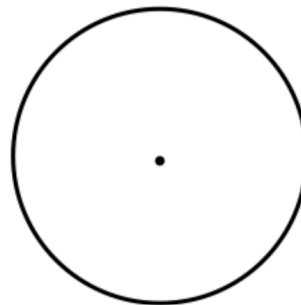
$$1\frac{1}{3} + 3\frac{7}{10}$$



| | | | | | |
|---|---|---|---|---|---|
| 4 | 2 | 1 | 1 | 3 | 4 |
|---|---|---|---|---|---|



Draw the diameter on this circle



Lindsey is planting daffodil bulbs

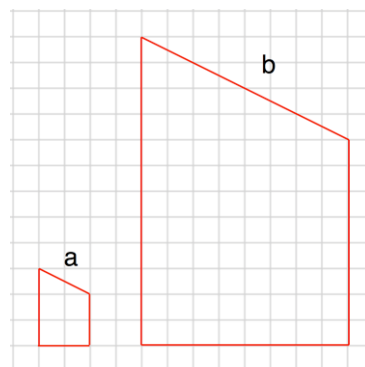
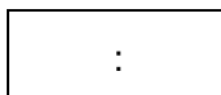
For every 7 bulbs Lindsey planted, only 5 bulbs grew into daffodils

Altogether 70 daffodils grew

How many bulbs did Lindsey plant?

Here are two similar shapes.

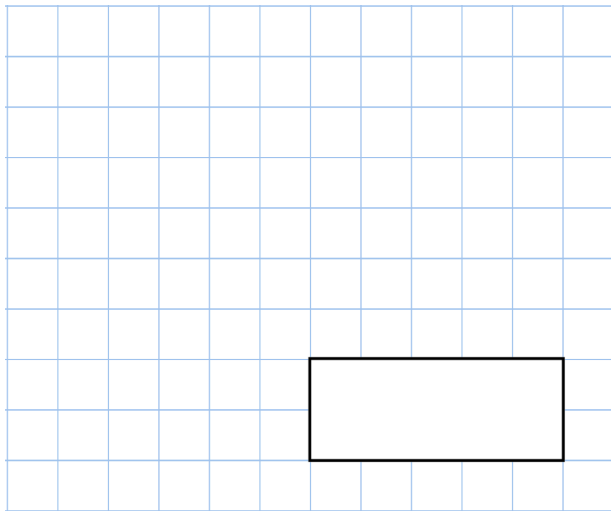
Write down the ratio of side a to side b.

 $a : b =$ 

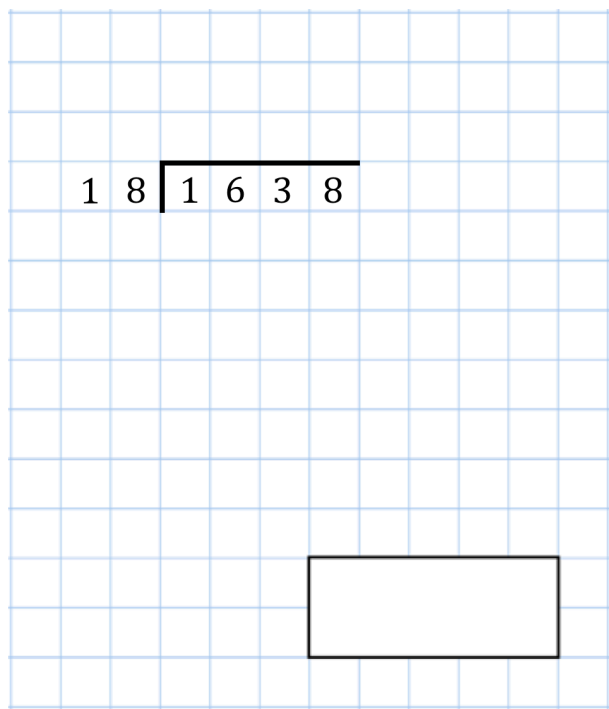


20th October

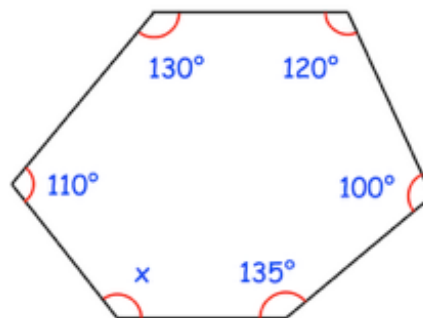
$$180 \times \frac{4}{5}$$



| | | | | | |
|---|---|---|---|---|---|
| 1 | 8 | 1 | 6 | 3 | 8 |
|---|---|---|---|---|---|



Find the size of angle x.



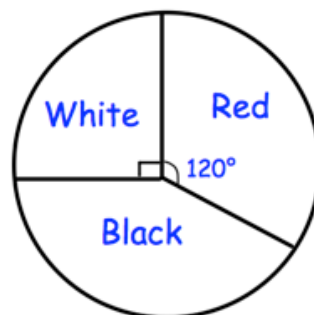
Burt is making cupcakes
He has made 400 cupcakes.
Burt places the cupcakes in boxes of 18.

How many boxes can he fill?



The pie chart shows information about the
72 counters in a bag.

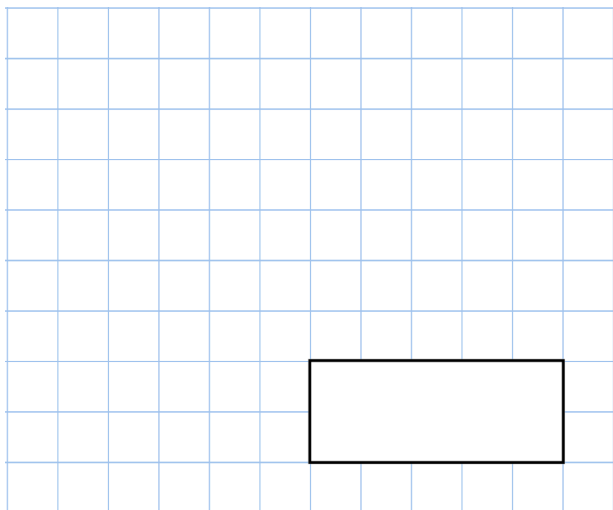
How many counters are black?



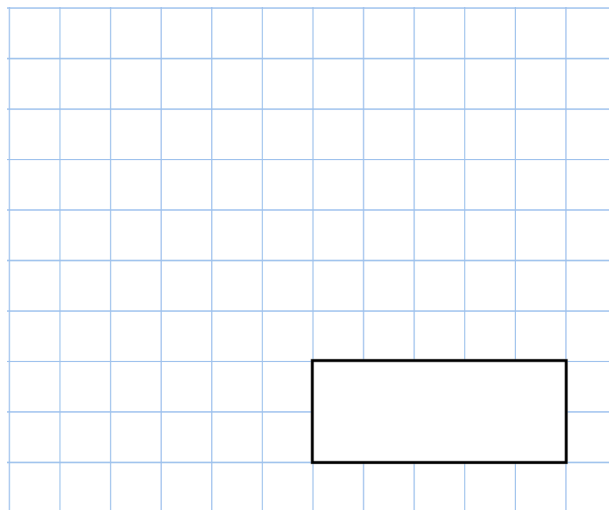


22nd October

$$31 \times 2.8$$

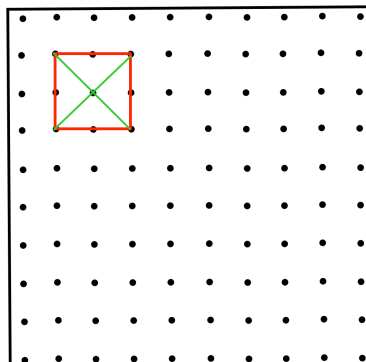


$$5\% \text{ of } 630$$

Draw a 305° angleWrite $\frac{14}{25}$ as a percentage

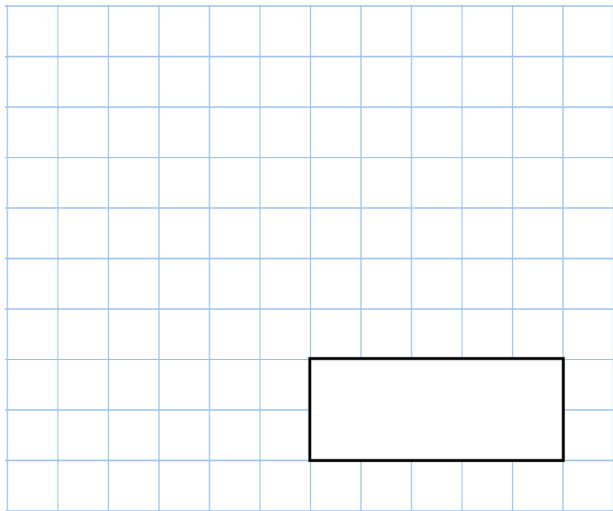
The diagonals of a square cross at right angles.

On the grid, draw a different type of quadrilateral where the diagonals **do not** cross at right angles

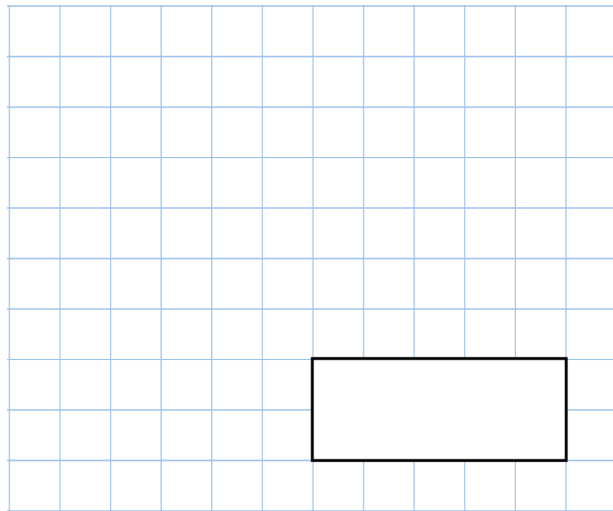


**23rd October**

$$\frac{5}{9} \times \frac{1}{2}$$



$$40 - (1 + 3)^2$$

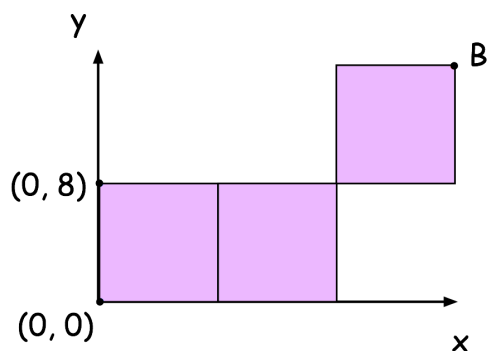


A bus travels 180 miles at a speed of 40 miles per hour.

How long does the journey take?



Find the lowest common multiple (LCM) of 18 and 20

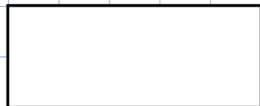
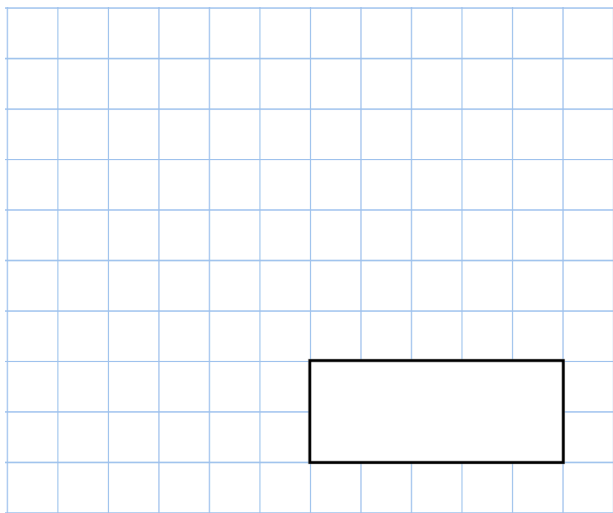


Three squares are placed on a grid.
Write down the coordinates of the point B.

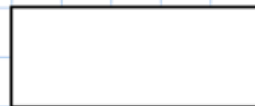
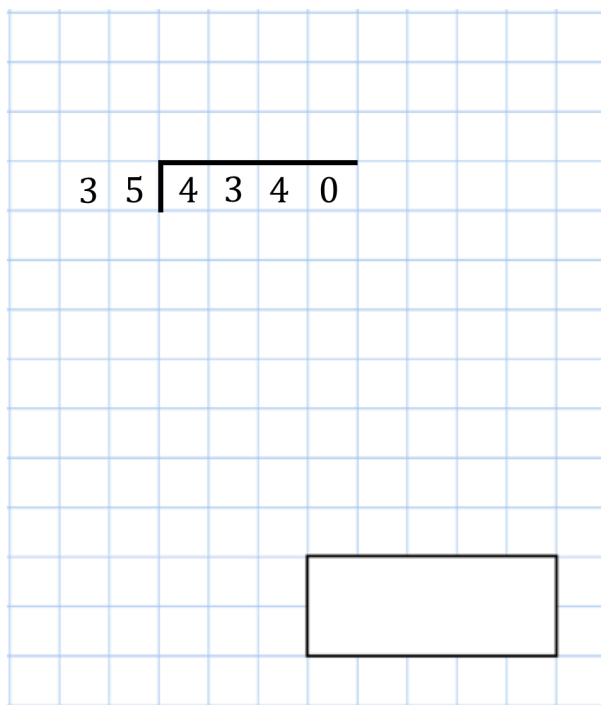


27th October

$$1.76 \times 8$$



| | | | | | |
|---|---|---|---|---|---|
| 3 | 5 | 4 | 3 | 4 | 0 |
|---|---|---|---|---|---|

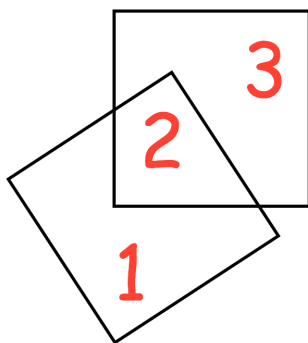


This sequence increases by an equal amount each time.

Find the three missing numbers



This diagram shows two squares that overlap to make 3 regions.

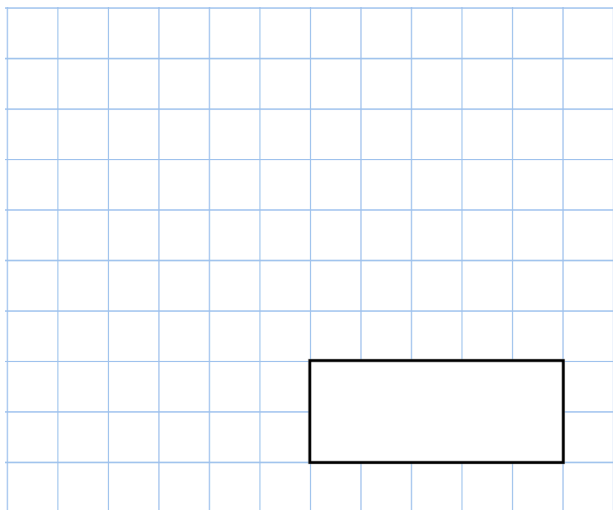


What is the greatest number of regions that can be made using two overlapping squares?

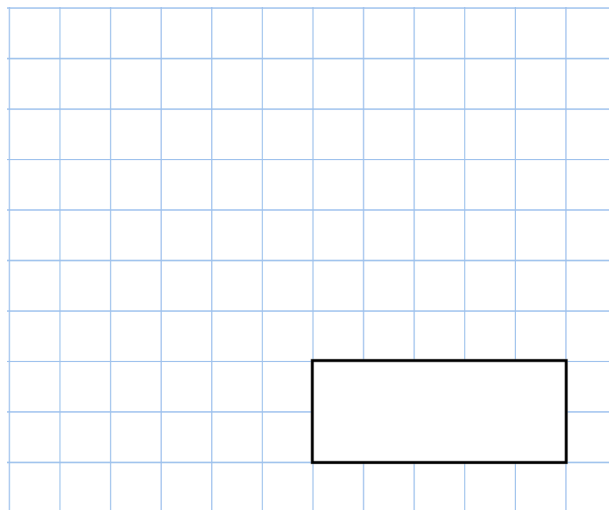


28th October

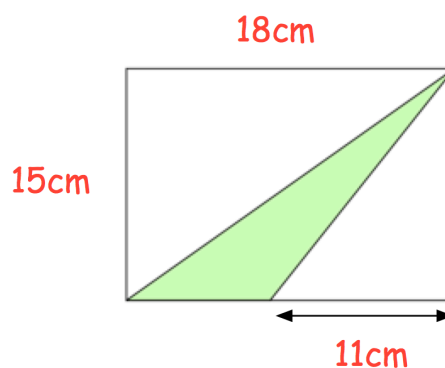
$$\frac{1}{8} \div 4$$



$$-60 + 125$$



Find the shaded area

Work out the value of x

$$5x + 20 = 35$$

Convert 3.5 kilometres into millimetres



29th October

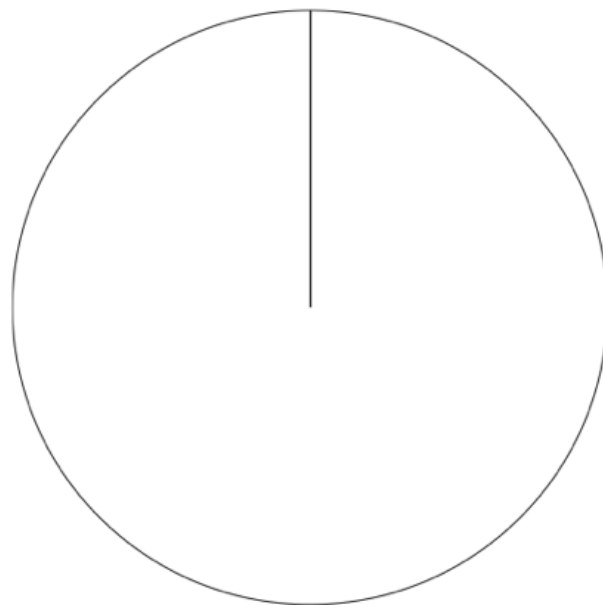
$$\frac{7}{20} = \boxed{} \%$$

%

| | | | | | |
|---|---|---|---|---|---|
| 2 | 4 | 3 | 8 | 8 | 8 |
|---|---|---|---|---|---|

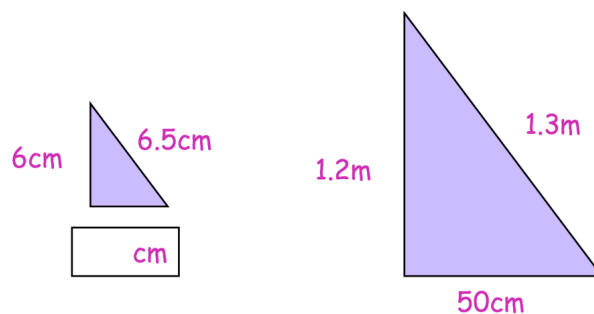
Draw a pie chart to show this information

| Breed | Frequency |
|--------------|-----------|
| Spaniel | 11 |
| Poodle | 7 |
| Greyhound | 4 |
| Jack Russell | 14 |



The two triangles are similar.

Work out the missing length



$$\frac{\begin{array}{c} \square \\ \square \\ \square \end{array}}{\begin{array}{c} \square \\ \square \\ \square \end{array}} = 62.5\%$$