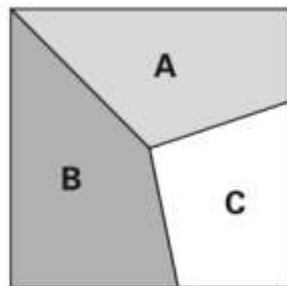


Year 6 – Abacus 7 –Friday 27th March:

Some real challenges her today. Lots of thinking required and you need to apply your skills – you do have all the knowledge required but they may be a challenge.

Question 1:

This square is divided into three parts.



Part **A** is $\frac{1}{3}$ of the area of the square.

Part **B** is $\frac{2}{5}$ of the area of the square.

What fraction of the area of the square is part **C**?

Question2:

Paulo makes a sequence of numbers.

He chooses a starting number and then subtracts equal amounts each time.

The **third number** in his sequence is **45**

The **tenth number** is **-32**



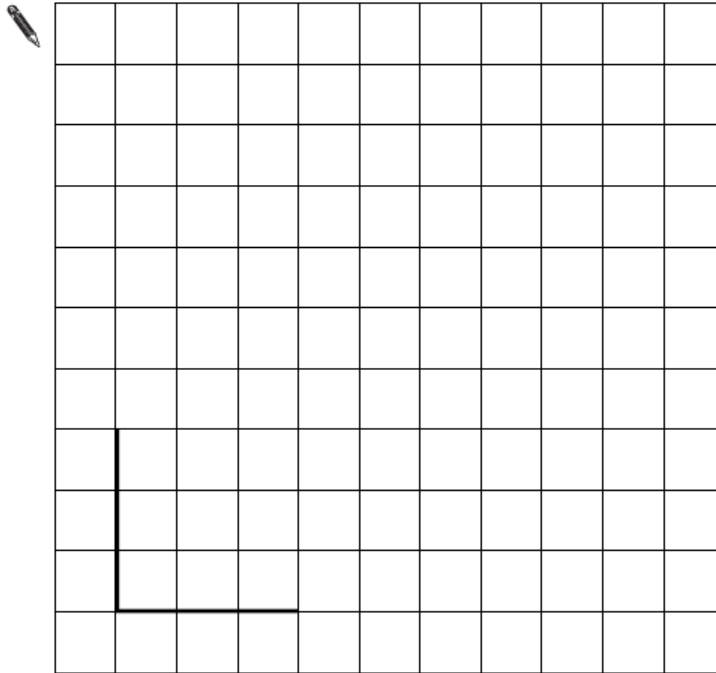
What is the **first** number in the sequence?

Question 3:

Here is a centimetre grid.

Draw **two** more lines to make a **quadrilateral** with an area of **18cm²**

Use a ruler.



Question 4:

Algebra skills - Remember to think of this like a weighing scales which must be balanced. Get rid of the letters from one side by cancelling them out – what would you need to do to do this. This get rid of the numbers off one side to group them on the other. Whatever you do to one side, you must do to the other

Keep rewriting the question as you move values around. Good luck...

Find the value of **t** in this equation.

$$33 - 8t = 15$$

Question 5:

Circle the two decimals which are closest in value to each other.



0.9

0.09

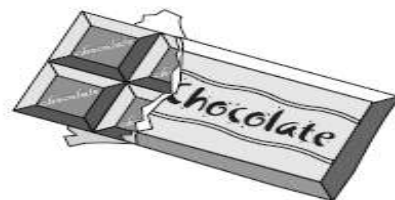
0.99

0.1

0.01

Question 6:

Time to use a bar model to really show this. If you use bar are follow the question as you divide it up, it will become much easier.



In Class 6, **80%** of the children like crisps.

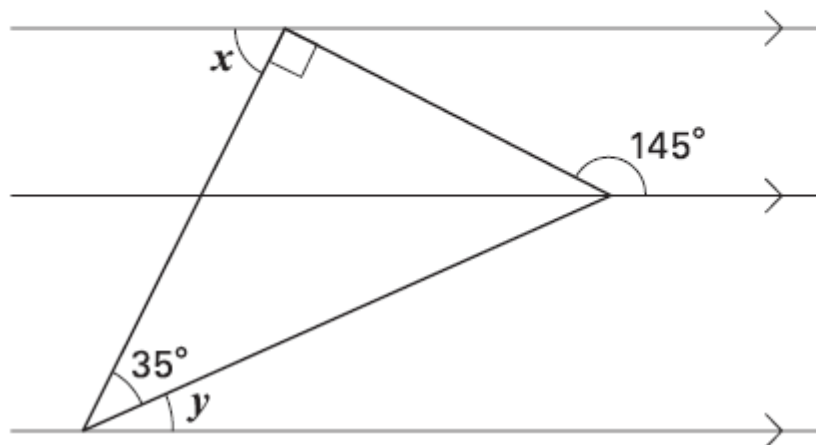
75% of the children **who like crisps** also like chocolate.

In Class 6, what percentage of the children like **both** crisps and chocolate?

Ultra Question:

This is tricky – a real puzzle, use what you know about triangles and angles made by lines crossing parallel lines. Have a go!

The diagram shows a right-angled triangle and three parallel lines.



Not to scale

Calculate the size of angle x and angle y

Do **not** use a protractor (angle measurer).



$$x = \boxed{^\circ}$$

$$y = \boxed{^\circ}$$