



**Decimals:** Every number has a decimal point, sometimes we see them and sometimes we don't. When we write a number let's say '576', it could also be written as 576.0 or 576.00 and so on. But to save us always having to write a decimal after every number we just write it as '576' and this is known as a 'whole number'.

If I go into a shop and pay €576 and 74 cent for an item I then write this number as a decimal number: €576.74



Anything to the left of the decimal point is made up of whole numbers.

Anything to the right of the decimal point is made up of fractions or pieces of numbers.

The value of a decimal number is as follows:

**5** · **9** **3** **4**

**Units** · **tenths** **hundredths** **thousandths**

$$\frac{1}{10} \text{ 's}$$

$$\frac{1}{100} \text{ 's}$$

$$\frac{1}{1000} \text{ 's}$$

5.954 represents how many bars of chocolate Mr. Roughan has.

This basically means he has 5 full bars, with 9/10's of a bar, 3/100's of a bar and 4/1000's of a bar.

So if I wanted to change this to a fraction I would write it as:

$$5 \frac{934}{1000}$$

**\*Remember our rhyme when converting decimals to fractions**  
**"How many rows after the decimal point equals how many 0's"**

$$\text{More examples: } 0.14 = \frac{14}{100} \quad 0.709 = \frac{709}{1000}$$

$$4.095 = 4 \frac{95}{1000} \quad 0.450 = \frac{450}{1000}$$

$$0.007 = \frac{7}{1000}$$

### Percentages:

We know that 'per cent' means per hundred, so when a fraction is written as hundredths, it's easy to change it to a percentage:

$$4/100 = 0.04 = 4\%$$

$$65/100 = 0.65 = 65\%$$

$$94/100 = 0.94 = 94\%$$

Unfortunately not all fractions will be over a 100 ☹️

\*For fractions that are not over 100 we need to multiply the top and bottom by the same 'number' to put it over a 100

*(sometimes it will not always be possible to put a fraction over a hundred for example 7/45, there is nothing we can multiply 45 by to change it to 100)*

For example:

4/10, we must multiply the top and bottom by 10 to put it over 100 =

$$40/100 = 0.40 = 40\%$$

1/4, We must multiply the top and bottom by 25 to put it over 100 =

$$25/100 = 0.25 = 25\%$$

Can you figure out what we need to multiply  $7/20$  by to put it over a 100???

\*\*Remember our strategy:  $\frac{\#}{100} = \#%$

$$\left(\frac{49}{100} = 49\%\right)$$