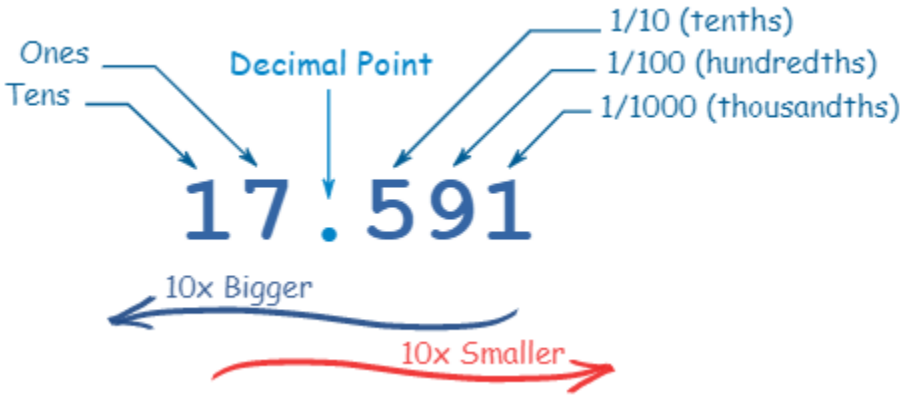
Fractions and Decimals (Part 2)

A quick recap for decimals

The word "Decimal" really means "based on 10" (From Latin *decima*: *a tenth part*).
We sometimes say "decimal" when we mean anything to do with our numbering system, but a "decimal number" usually means there is a decimal Point.



Decimals, Fractions and Percentages are just different ways of showing the same value:

A Half can be written...

... as a fraction: $\frac{1}{2}$

... as a decimal: 0.5

... as a percentage: 50%

A Quarter can be written...

... as a fraction: $\frac{1}{4}$

... as a decimal: 0.25

... as a percentage: 25%

We can convert between percentages, fractions and decimals. Some hints:

- Remember percent means 'out of 100' so if you can convert a fraction into hundredths then it's easy to change into a percentage.
- To change a percentage to a fraction, you will need to use the denominator 100 – you may then need to simplify.
- Remember what each digit represents in a decimal (look above). This will help you convert into fractions with 10 or 100 as the denominator.
- Sometimes converting a percentage into a fraction then makes it easier to convert it to a decimal and…converting a decimal into a fraction can then make it easier to convert it into a percentage!

Identifying the value of decimal digits

Activity 1

0.14	0.4	0.56	0.63	0.41	0.42	0.36	0.87
0.24	0.08	0.13	0.51	0.96	0.73	0.59	0.86
0.77	0.1	0.12	0.6	0.17	0.74	0.29	0.34
0.67	0.01	0.22	0.69	0.55	0.61	0.26	0.33
0.28	0.79	0.03	0.54	0.61	0.09	0.66	0.5
0.07	0.52	0.19	0.72	0.56	0.42	0.78	0.05

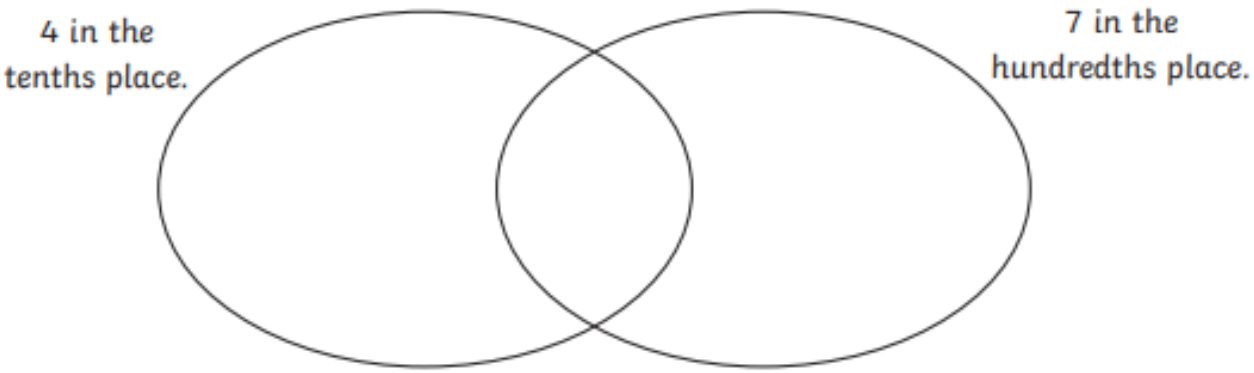
Find all the numbers above that have the following:

7 in the tenths place	
4 in the hundredths place	
1 in the tenths place	
3 in the hundredths place	
5 in the tenths place	
9 in the hundredths place	
2 in the tenths place and 6 in the hundredth place	

Activity 2

Complete this Venn diagram with these numbers

0.47 0.37 0.12 0.53 0.87 0.41 0.79 0.42 0.19



Recall and use equivalences

Activity 1

Complete the following word problems but converting between fractions and percentages.

1. 25% of a class join the chess club. What fraction of children do not join the chess club?

2. A third of a box of crisps are salt and vinegar flavour. 50% are ready salted. The rest are cheese and onion. What fraction of the crisps are cheese and onion?

3. There are 30 children in a class, of whom twelve are boys. What fraction of the class are girls?

4. Seven tenths of a crowd at a football match support the home team. If the rest are all away fans, what percentage of the crowd support the away team?

5. There are 80 sweets in a bag. Complete the following table showing the number, fraction and percentage of each flavour.

Flavour	Number	Fraction	Percentage
Orange	20		
Strawberry	16		
Lime	44		

Activity 2: Can you work out these common equivalences? Complete any workings underneath the table.

Fraction	Decimal Fraction	Percentage
		40%
	0.50	
$\frac{1}{4}$		
		80%
	0.30	
$\frac{1}{5}$		
	0.75	
$\frac{7}{25}$		