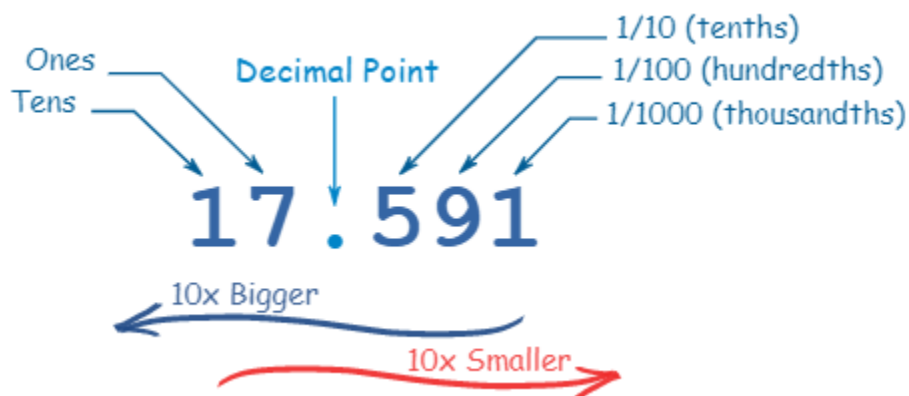


Fractions and Decimals (Part 2)

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!

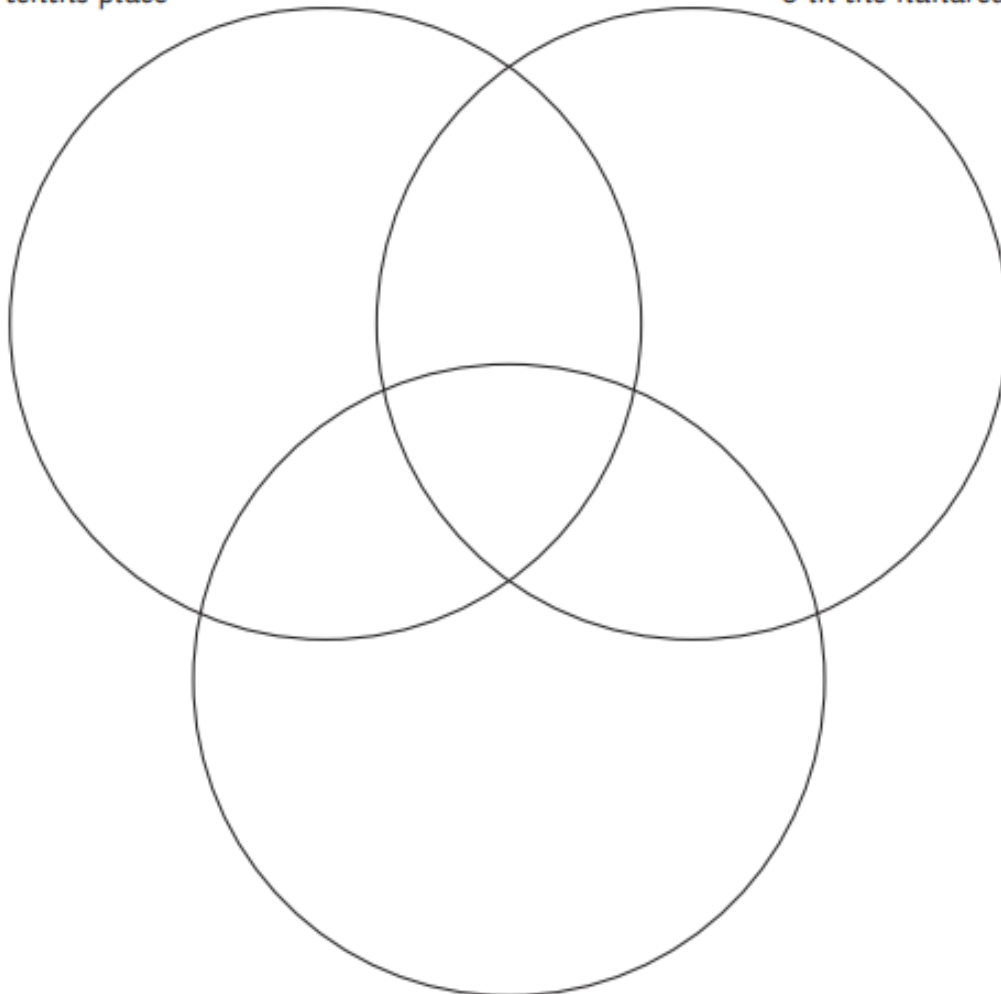
Identifying the value of decimal digits

0.529	0.651	0.8	0.646	0.099	0.062	0.549	0.898
0.983	0.32	0.019	0.305	0.804	0.101	0.377	0.388
0.663	0.207	0.797	0.532	0.24	0.596	0.332	0.376
0.018	0.848	0.08	0.486	0.104	0.754	0.117	0.142
0.405	0.27	0.788	0.527	0.818	0.447	0.027	0.141
0.669	0.428	0.833	0.763	0.874	0.374	0.49	0.132

Place the following numbers in the Venn diagram. Not all numbers will fit.

8 in the tenths place

0 in the hundredths place



4 in the thousandths place

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	
$\frac{7}{25}$		

Multiplying decimals by single digits

Calculate the following mentally. You will need to use your multiplication tables and your knowledge of multiplying and dividing by 10.

$0.1 \times 8 =$	$0.03 \times 4 =$	$9 \times 0.5 =$
$7 \times 0.05 =$	$6 \times 0.8 =$	$0.02 \times 9 =$
$0.7 \times 8 =$	$0.05 \times 7 =$	$0.06 \times 6 =$
$7 \times 0.9 =$	$0.6 \times 7 =$	$4 \times 0.02 =$
$0.06 \times 3 =$	$8 \times 0.8 =$	$0.08 \times 8 =$
$1 \times 0.05 =$	$0.4 \times 7 =$	$6 \times 0.09 =$