Y5 - Decimals and Percentages

This home-learning will focus on **decimals and percentages**. Here are the key objectives that we will be covering:

- To read, write, order and compare numbers with up to three decimal places.
- To read and write decimal numbers as fractions (for example, 0.71 = 71/100).
- To round decimals with two decimal places to the nearest whole number, and to one decimal place.
- To recognise the percent symbol (%) and understand that percent relates to "number of parts per hundred."
- To write percentages as a fraction with 100 as the denominator, and as a decimal fraction (e.g. 86% = 86/100 = 0.86).

Activities & Games!

☆ Can you order the following decimals from the smallest value to the largest value? 0.02, 0.05. 0.10, 0.50, 0.20, 0.90, 0.83 . Write down a decimal that could come <u>before</u> and <u>after</u> the list.

☆☆ Draw a blank number line, with 0 at one end and 1 at the other. Ask an adult to give you a decimal number, less than one; the number can have up to 3 decimal places. Where do you need to place this number on the number line? Repeat with more numbers.

☆☆☆ Write the fraction, decimal and percentage represented by these shapes: Get an adult to give you some more examples.
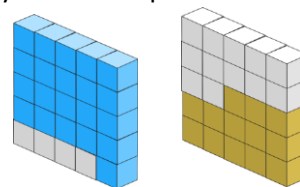
☆☆ To play this Spiralling Decimals game, you will need: a partner, a copy of the spiral game board (you could draw one out yourself), and two coloured pencils. Take turns to mark a number from the grid, onto the spiral. Keep taking it in turns, the winner is the person who manages to mark three numbers next to each other.

0.5	0.25	0.75	0.3
0.35	0.9	0.99	0.999
0.1	0.01	0.05	0.79
0.64	0.32	0.54	0.865
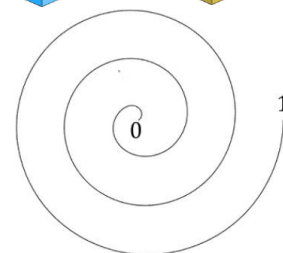
☆☆ Create yourself a 10x10 hundred square; there are lots online you could print off. Now start to create a garden. As you add each feature, describe the percentage and fraction of the garden that that feature takes up.

☆☆ Can you answer these questions without doing the calculation? You must give an explanation for your choice. Would you rather: A) 2/5 or 30% of £40? B) 75% or 7/10 of £60? C) 4/20 or 20% of £120? D) 25% or 1/25 of £50? E) 7/10 or 50% of £70?

Going deeper...

Put out the flags

Amir and Beth both have a string of flags. They have red flags, white flags, blue flags, and union jacks.

They both counted how many of each colour they had.
Amir's flags are 50 % blue, 35 % red, 10 % white and 5 % union jacks.
Beth's flags are 40 % blue, 32 % red, 20 % white and 8 % union jacks.
They both have as few flags as is possible with those percentages.
Who has the most flags?
Who has the most red flags?
Who has the most blue flags?
How many union jacks do they have between them?

If instead you know that Amir and Beth have 10 union jacks between them, how many flags do they have altogether now?

Wonderful websites

Decimals game

Percentages game

Decimal detectives

Whilst it can be very tempting to encourage your child to have a go at the more challenging activities, it is far better to work with them at a level they feel confident with. Significant and regular practise of even the most basic skills outlined in this document will lead to a much deeper understanding and greater proficiency, and ultimately a much more pleasant 'homework' experience for you and your child!