# Y4 Maths — What they need to know...

In Year 4, children start to work with numbers with up to two decimal places. They will develop a secure understanding of tenths and hundredths, and should be able to write them as both decimals _and_ fractions. They should recognise that hundredths arise from dividing one whole into one hundred equal parts, and in turn realise that one tenth is the same as ten hundredths. In this way, they should know that 46 hundredths (0.46) is the same as 4 tenths and 6 hundredths. Children will investigate different ways to partition decimal numbers as well. For example, 0.34 can be partitioned into 3 tenths (0.3) and 4 hundredths (0.04), but also into 2 tenths (0.2) and 14 hundredths (0.14). Strategies will be developed for multiplying and dividing numbers (including decimal numbers) by 10 or 100; a place value chart will be used to demonstrate how the digits move and how 0 should be used as a place holder. Children must also be able to compare, order and round decimals to the nearest whole number.

Activities & Games!

★★★ **How many ways?** Write down any 3 digit number that has 2 decimal places (e.g. 4.26) . How many different ways can you partition this number? For instance, 4.24 can be partitioned into 3 ones, 11 tenths (1.1) and 16 hundredths (0.16). What other ways can it be partitioned?

★★★ **How many ways now?** Similar to the activity above, can you partition decimal numbers in to fractions and decimals like this?
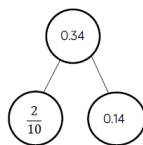
★ **Play your cards right:** You will need a deck of cards for this game. Remove the picture cards and let Aces count as 1s and 10s equal 0. Choose a decimal target number (e.g. 5.64) and deal each player 5 cards. Each player must now construct a number using their cards that is as closest as possible to the target number. The player with the closest number wins a point, and they can choose the next target number. The overall winner is the first player to score 5 points.

★ **Shopping receipts:** Look at the prices on a shopping receipt. Round all the prices to the nearest pound and find the new total. How close is it to the actual cost of the receipt?

★★ **Debate:** _'Zero is worth nothing and is therefore no use.'_ Debate this statement with family members at home. What conclusions have you come to?

★★ **Decimal Squares:** The rows, columns and diagonals in these decimal squares all add up to the same decimal fraction. Can you work out what the missing numbers are?

0.8		
0.8		0.6
0.5		

	2.1	
1.3	0.3	2.0

0.5		
1.8		
0.4	1.0	

★★ **Number line:** Place the numbers below on this number line:

7 ←———————————————→ 8

7.3   7.21   7.95   7.6   7.74   7.72   7.13   7.8   7.62

★★ **Quick Quiz:** Get a grown up to give you a series of decimal numbers which you must multiple or divide by either 10 or 100. How many questions can you correctly solve in 1 minute?

Going deeper...

Spiralling Decimals for Two!

You'll need a grown-up to play with. You'll also need a copy of the game board (on the school website) and two different coloured pencils.

Decide who goes first. Take turns to choose a number from the grid and mark it on the spiral. Make sure you know where 0 and where 1 is! Keep taking turns until one of you has marked three numbers next to each other.
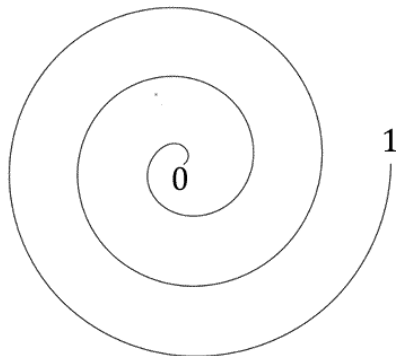
0.5	0.25	0.75	0.3
0.35	0.9	0.99	0.999
0.1	0.01	0.05	1.79
0.64	0.32	0.54	0.865

Note for grown-ups:

This game is to help children learn how decimals are ordered, without worrying about exactly where the decimals should go on a number line - only the order of the numbers matters in this game.

My Maths

MyMaths homework has been updated for this half term.

Use our school log in (Username: **coleridge1,** Password: **success74**), and then your own login details to access activities related to our current topic on the MyMaths website.

You can also have a look to see if there are some other fun games you would like to play. If you have misplaced your personal login, please see your class teacher to re-issue you one.

Wonderful websites

Moving Digit Cards

Ordering Numbers

Higher or Lower

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!