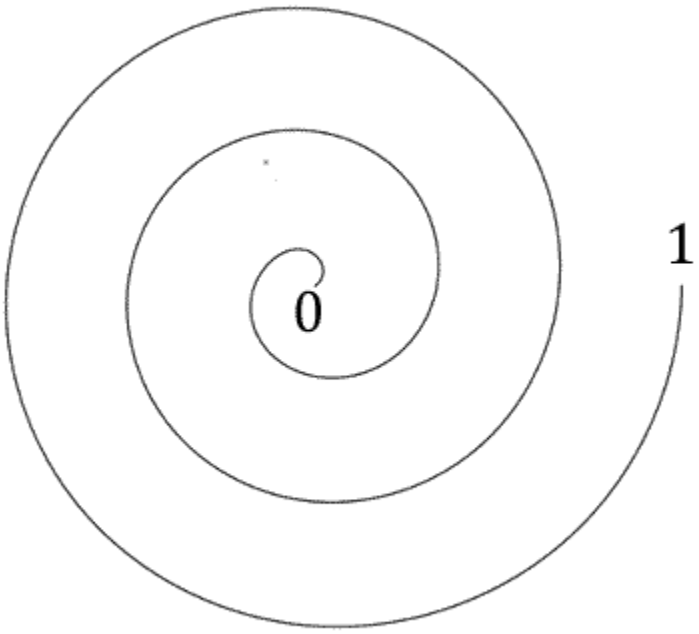
Spiralling Decimals

Have you noticed that some very long numbers are very big whilst other very long numbers are small? Can you think of an example of each?
Here's a game where you can test your skill at putting small numbers into the right order - it's not as easy as it sounds!

How to play

You need a partner, a copy of the game board, 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	0.79
0.64	0.32	0.54	0.865



What next?

Can you work out a winning strategy?
Does it matter who goes first?
Does it matter which number you choose first?

Can you make up a different set of numbers which would make the game more challenging?
Perhaps you could have different start and end numbers for your spiral?