

## Understanding place values and place holders

'Decimal' simply means **based on ten**. Our numbers are organised in a system based on multiples or sub-multiples of ten.

The position of a digit in a number shows its '**place value**':

	H	T	U
This 6 is six tens		6	7
This 6 is six hundreds	6	9	8

This system continues **after** the decimal point. Places to the right of the decimal point are called **decimal places**, with tenths, hundredths and thousandths in the first three decimal places. (When speaking numbers, be sure to make the difference between 'tens' and 'tenths', for example, clear.)

	H	T	U	.	t	h	th
Twelve point three (or twelve and three tenths)		1	2	.	3		
Eight point zero three (or eight and three hundredths)			8	.	0	3	

Notice that a zero 'place holder' was needed in 8.03, to keep the 3 in its correct position.

Place holders are also needed in each of the numbers below:

	H	T	U	.	t	h	th
Thirty-one point zero zero seven (or thirty one and seven thousandths)		3	1	.	0	0	7
Zero point zero one nine (or nineteen thousandths)			0	.	0	1	9