



Changing decimals to percentages using fractions

There are many ways to **change** decimals to percentages. You can use **fractions** to help you make the conversion.

Example: what is 0.75 expressed as a percentage?

Put the decimal in a place value table:

Tens	Units	.	Tenths	Hundredths	Thousandths
10	1		$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
	0	.	7	5	

Look at the decimal shown above, 0.75. In the table we can read this as 0 units, $\frac{7}{10}$ and $\frac{5}{100}$.

We can also read the figures after the decimal point as one number - seventy five. Combine this with the heading of the **last column** that contains a number. With the decimal 0.75 the last number 5 is in the hundredths ($\frac{1}{100}$) column. The decimal 0.75 is the **same** as the fraction $\frac{75}{100}$.

To convert this to a percentage, remember that percent means 'out of 100'.

$\frac{75}{100}$ means 75 out of 100, which is exactly the same as 75%.

Here are some more examples:

Tens	Units	.	Tenths	Hundredths	Thousandths
10	1		$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
	0	.	3	0	
	0	.	0	6	
	0	.	1	2	
	1	.	0	0	

The decimal 0.3 is $\frac{3}{10}$, which is the same as $\frac{30}{100}$ (30 out of 100) = 30%.

The decimal 0.06 is $\frac{6}{100}$ (6 out of 100) = 6%.

The decimal 0.12 is $\frac{12}{100}$ (12 out of 100) = 12%.

The decimal 1 is $\frac{1}{1}$, which is the same as $\frac{100}{100}$ (100 out of 100) = 100%.