

11 Fractions and Percentages

11.1 Fractions, Decimals and Percentages

Percentages can be converted to fractions because 'percentage' simply means 'per hundred'. They can also be converted very easily to decimals, which can be useful when using a calculator. Fractions and decimals can also be converted back to percentages.



Worked Example 1

Convert each of the following percentages to fractions.

- (a) 50% (b) 40% (c) 8%



Solution

$$\begin{array}{lll} \text{(a)} \quad 50\% = \frac{50}{100} & \text{(b)} \quad 40\% = \frac{40}{100} & \text{(c)} \quad 8\% = \frac{8}{100} \\ & = \frac{1}{2} & = \frac{2}{25} \end{array}$$



Worked Example 2

Convert each of the following percentages to decimals.

- (a) 60% (b) 72% (c) 6%



Solution

$$\begin{array}{lll} \text{(a)} \quad 60\% = \frac{60}{100} & \text{(b)} \quad 72\% = \frac{72}{100} & \text{(c)} \quad 6\% = \frac{6}{100} \\ & = 0.6 & = 0.06 \end{array}$$



Worked Example 3

Convert each of the following decimals to percentages.

- (a) 0.04 (b) 0.65 (c) 0.9



Solution

$$\begin{array}{lll} \text{(a)} \quad 0.04 = \frac{4}{100} & \text{(b)} \quad 0.65 = \frac{65}{100} & \text{(c)} \quad 0.9 = \frac{9}{10} \\ & = 4\% & = \frac{90}{100} \\ & & = 90\% \end{array}$$



Information

'Per cent' comes from the Latin, 'per centum', which means 'for each hundred'.