Unit 8 Decimals, Fractions and Percentages — Introduction

Learning objectives

This unit aims to give participants an understanding of

- converting decimals to fractions and vice versa
- the concept of percentages
- conversion between decimals, fractions and percentages.

Facts to remember

Equivalence of decimals, fractions and percentages.

For example

Decimal	Fraction	Percentage
0.5	$\frac{1}{2}$	50%
0.25	$\frac{1}{4}$	25%
0.75	$\frac{3}{4}$	75%
0.1	$\frac{1}{10}$	10%
0.2	$\frac{1}{5}$	20%
0.9	$\frac{9}{10}$	90%
1.0	$\frac{1}{1}$	100%
0.125	$\frac{1}{8}$	12.5%

Conversions Decimal to fraction *For example* $0.15 \Rightarrow \frac{15}{100} \Rightarrow \frac{3}{20}$

Fraction to decimal The denominators need to be 10, 100, 1000, etc.

For example $\frac{4}{25} \Rightarrow \frac{4 \times 4}{4 \times 25} = \frac{16}{100} \Rightarrow 0.16$

Decimal to percentage Multiply by 100

For example $0.15 \times 100 \Rightarrow 15\%$

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Percentage to decimal — Divide by 100

For example $35\% \Rightarrow \frac{35}{100} = 0.35$

Fraction to percentage — Make the denominator 100

For example $30\% \Rightarrow \frac{30}{100} = \frac{3}{10}$

Percentage to fraction — Divide by 100 and simplify

For example $60\% \Rightarrow \frac{60}{100} = \frac{3}{5}$