

Percentage

Level 1

Percentages arise in numerous situations.

They are used to make comparisons and in the business world they are used to describe **interest rates**, **profits**, **losses**, **discounts**, **commissions**, **annuities** etc.

Examples

Practise 1

Convert the following to percentages

- | | | |
|-------------------|------------------|------------------|
| a) $\frac{1}{4}$ | b) $\frac{3}{4}$ | c) $\frac{1}{8}$ |
| d) $\frac{7}{10}$ | e) $\frac{5}{8}$ | f) $\frac{2}{5}$ |
| g) $\frac{1}{3}$ | h) $\frac{5}{6}$ | j) $\frac{2}{3}$ |

Find

- | | | |
|--------------|----------------------------|----------------------------|
| k) 50% of 48 | m) 75% of 12 | n) 25% of 48 |
| p) 9% of 70 | q) $33\frac{1}{3}\%$ of 84 | r) $12\frac{1}{2}\%$ of 32 |

Express the first quantity as a percentage of the second

- | | | |
|-------------------|--------------------|---------------|
| s) 40 cm; 1 metre | t) 20 mins; 1 hour | u) 700g; 2 kg |
|-------------------|--------------------|---------------|

Practise 2

Write the answers only to these stories about percentages.

- 30 students, 70% attended the game. How many at the game?
- 80 oranges, 10% are not ripe. How many are ripe?
- 50 questions, 42 correct. What percentage was wrong?
- Temperature 30°C . 10% fall in temperature. What is the new temperature?
- Price of ipod \$800. 20% reduction is given. What price is paid?

Practise 3

- In a class there are 24 boys and 16 girls. What is the percentage composition of the class?
- Nickel silver contains 2 parts copper 1 part zinc & 1 part nickel. State percentage of each.
- Rain damaged 80% of goods in a store. If total value of goods was \$6850, find value of goods damaged.

Think of dividing or multiplying by 100.

$$12\% \text{ of } 50 = 50 \times \frac{12}{100}$$

In a short test 12 out of 20 is 60%

$$\frac{12}{20} \times 100$$

Find 12% of \$500 $500 \times \frac{12}{100} = \60

30 out of 40 is $\frac{30}{40} \times 100 = 75\%$