

Year 8 Knowledge Organiser

FRACTIONS & PERCENTAGES OF A QUANTITY

Key Concept

Multipliers

Find 15%	$\times 0.15$
Increase by 15%	$\times 1.15$
Decrease by 15%	$\times 0.85$

For **reverse percentage** problems you can divide by the multiplier to find the original amount.

Key Words

Percentage: Is a proportion that shows a number as parts per hundred.

Fraction: A fraction is made up of a numerator (top) and a denominator (bottom).

Multiplier: A quantity by which a given number is to be multiplied.

Tip

There is a % function on your calculator.

To find 25% of 14 on a calculator:
2, 5, SHIFT, (, ×, 1, 4, =

Examples

Non-Calculator

$$\frac{3}{4} \text{ of } 32 = 32 \div 4 \times 3 = 24$$

$$\begin{array}{l} 16\% \text{ of } 240 \\ 10\% = 24 \\ 5\% = 12 \\ 1\% = 2.4 \end{array} \left. \vphantom{\begin{array}{l} 16\% \text{ of } 240 \\ 10\% = 24 \\ 5\% = 12 \\ 1\% = 2.4 \end{array}} \right\} \begin{array}{l} = 24 + 12 + 2.4 \\ = 38.4 \end{array}$$

Calculator

Find **32%** of 54.60 = **0.32** \times 54.60 = 17.472

Increase 45 by **12%** = 45 \times **1.12** = 50.4



Clip Numbers

77, 84-89, 96

Questions

Find these fractions of amounts:

- a) $\frac{1}{3}$ of 15 a) $\frac{1}{5}$ of 65 a) $\frac{2}{7}$ of 14 a) $\frac{4}{9}$ of 45
 2) a) 35% of 140 b) 21% of 360 c) Increase 60 by 15%