

Percentage change

Pearson Edexcel GCSE Mathematics 1MA1 • L011

Foundation and Higher • Lesson resources

REACH FOR THE STAR | GCSE MATHEMATICS

Purpose

Use multipliers for percentage change, recover an original value and distinguish simple interest from repeated growth.

Vocabulary

Multiplier: scale factor for a change. Increase: add to the original. Decrease: subtract from the original. Reverse percentage: recover the original. Simple interest: interest calculated on the original principal each year.

Why the method works

A 20% increase leaves 120% of the original, so multiply by 1.20. A 20% decrease leaves 80%, so multiply by 0.80. If a sale price is £72 after a 20% reduction, £72 is 80% of the original: divide 72 by 0.8 to recover £90.

Method and checking

Identify which value represents 100%. Write $\text{new} = \text{original} \times \text{multiplier}$, then multiply forwards or divide backwards. $\text{Percentage change} = \text{change} \div \text{original} \times 100\%$. Simple interest uses the same original principal each year; add the accumulated interest at the end.

Common errors and next attempt

If learners subtract the percentage from the final value to reverse, label the original as 100% and the final as 80% or 120%. If increase/decrease are claimed to cancel, test £100 up 20% then down 20%: £96. Recheck £54 after a 10% fall: original £60.