Percentages and purchase comparisons

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the worked example, then show each step in the practice questions. Show the mathematical steps. A calculator, graphing tool or CAS may be used to check results where useful.

What you will practise

• Arithmetic and geometric sequences, first-order linear recurrence relations and financial mathematics

Useful starting skills: Year 10 algebra, percentages, statistical displays, geometry and trigonometry.

Use a multiplier for a percentage change. Reverse a percentage by dividing by the multiplier, not by subtracting the same percentage.

Compare purchase offers using total cost, timing and stated fees. These are fictional classroom examples; use the supplied rates rather than current financial product rules.

Worked example

A $240 item is discounted 25%. Find the sale price.

Pay 75% of the original: $240 \times 0.75 = 180$.

Answer: $180.

Try it yourself

Name: _____ Date: _____

1. Increase $80 by 15%.

2. An item costs $99 including 10% GST. Find its pre-tax price and GST component.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. $92.

$80 \times 1.15 = 92$.

2. $90 and $9.

$99/1.10 = 90$; tax $= 99 - 90$.

Curriculum reference: General Mathematics Units 1–2 — Arithmetic and geometric sequences, first-order linear recurrence relations and financial mathematics

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