Percentages and financial mathematics â€” topic test

Name: _____ Date: _____

15 questions | 37 marks | 45 minutes

A progressive mixed paper covering percentage change, reverse percentages, comparisons, budgets and transparent financial models.

No calculator needed.

1. Write the multiplier for a 15% increase. [1 mark]

2. Find 20% of 85. [1 mark]

3. Decrease 120 by 25%. [2 marks]

4. A population rises from 200 to 230. Find the percentage increase. [2 marks]

5. A 70 AUD ticket has 10% off. Find the sale price. [2 marks]

6. A store pays 32 AUD for an item and marks it up by 25%. Find the listed price. [2 marks]

7. A price is 96 AUD after a 20% discount. Find its original price. [2 marks]

8. A number becomes 156 after a 30% increase. Find the original number. [2 marks]

9. Group A completes 21 of 30 tasks. Group B completes 32 of 50 tasks. Compare their completion rates. [3 marks]

10. A rate rises from 25% to 30%. [3 marks]

(a) Find the rise in percentage points. [1 mark]

(b) Find the relative percentage increase. [2 marks]

11. An item costs a shop 60 AUD. It is marked up by 50%, then sold at 20% off its listed price. [4 marks]

(a) Find the listed price. [1 mark]

(b) Find the sale price. [1 mark]

(c) Find the percentage profit on cost. [2 marks]

12. A group has a 100 AUD budget. Three entries cost 18 AUD each, transport costs 22 AUD and food costs 19 AUD. [3 marks]

(a) Find the money left. [2 marks]

(b) Decide whether an extra 8 AUD purchase fits the budget. Explain. [1 mark]

13. A savings plan starts at 90 AUD. Weekly income is 24 AUD and spending is 14 AUD. [3 marks]

(a) Find the balance after eight weeks. [2 marks]

(b) Give one assumption in this prediction. [1 mark]

14. A classroom simple-interest model uses 600 AUD at 3% per year for two years. [3 marks]

(a) Find the interest and final balance. [2 marks]

(b) Explain why fees would need an extra term in the model. [1 mark]

15. A coat is 120 AUD. Offer A takes 30% off. Offer B takes 20% off, then a further 15% off the reduced price. [4 marks]

(a) Find both final prices and say which offer is cheaper. [2 marks]

(b) Assess the claim that Offer B gives 35% off. [2 marks]