Investing and borrowing - Practice test 1

Name: _____ Date: _____

10 questions | 56 marks | 70 minutes

An original mixed topic paper. Show calculations, label rates and periods, and explain conclusions using the supplied hypothetical financial rules. Round final monetary answers to cents unless a minimum deposit is requested.

A scientific calculator may be used.

1. A coat has a marked price of AUD 180. The store gives a 15% discount. [4 marks]

(a) Find the discounted price. [2 marks]

(b) The store then adds a AUD 9 delivery fee. Find the total and the saving compared with the original marked price. [2 marks]

2. A savings statement has an opening balance of AUD 840, a deposit of AUD 200, a withdrawal of AUD 125, AUD 2.20 interest and a AUD 3 fee. [4 marks]

(a) Find the closing balance. [2 marks]

(b) Another withdrawal is later found. The corrected closing balance is AUD 864.20. Find the missing withdrawal. [2 marks]

3. AUD 4500 is invested at 4% simple interest per year. [6 marks]

(a) Find interest earned in 18 months. [3 marks]

(b) How long would it take to earn AUD 720 interest at this rate? [3 marks]

4. AUD 3000 is invested for 3 years at 5% per year. [6 marks]

(a) Find the final value with annual compounding. [3 marks]

(b) Find the extra interest over simple interest for the same term. [3 marks]

5. A club needs AUD 7000 in 4 years. A single deposit earns 4.5% compounded annually. [6 marks]

(a) Find the present value to the nearest cent. [3 marks]

(b) State the minimum deposit that meets the target and explain the rounding. [3 marks]

6. An account quotes 6% nominal annual interest compounded monthly. [6 marks]

(a) Find its effective annual rate to 3 decimal places. [3 marks]

(b) Would 6.1% compounded annually give greater annual growth, ignoring fees? [3 marks]

7. For one year, account A pays 3% simple interest without fees. B pays 4% simple interest and charges AUD 30 annually. [6 marks]

(a) Find the starting balance at which final values are equal. [3 marks]

(b) Which account gives more on AUD 1800? Give both final balances. [3 marks]

8. Mia buys 120 shares at AUD 9 with AUD 18 brokerage. She later receives a AUD 0.30 dividend per share and sells at AUD 9.80 with AUD 18 brokerage. [6 marks]

(a) Find the net profit. [3 marks]

(b) Find ROI to 2 decimal places. [3 marks]

9. AUD 8000 earns 5% simple interest for one year. A supplied 25% tax applies only to the interest. Prices rise 2% over the year. [6 marks]

(a) Find the after-tax closing balance. [3 marks]

(b) Find the real percentage gain to 3 decimal places. [3 marks]

10. A simplified AUD 1800 loan charges 1% interest each month before a AUD 250 month-end repayment. [6 marks]

(a) Find the balance after two months. [3 marks]

(b) Explain why subtracting two repayments from the original loan before calculating interest gives a different answer. [3 marks]