Practice worksheet | Financial mathematics

Reducing-balance loans

Name: _____ Date: _____

6 questions | 17 marks

1. On AUD 6,000 at 0.5% monthly interest, what is the first month’s interest? [3 marks]

2. AUD 9,600 is repaid in 24 equal month-end payments at zero interest. Find the payment. [3 marks]

3. A balance is AUD 5,000 at 1% monthly interest. Explain what happens if each month’s repayment is AUD 40. [3 marks]

4. Find the monthly repayment for AUD 12,000 over 36 months at 6% nominal annually, compounded monthly. [3 marks]

5. A debt of AUD 8,000 has a monthly interest rate of 0.75%. What repayment leaves the balance unchanged after that month? [3 marks]

6. For a loan balance B and periodic rate i, explain why a fixed repayment can reduce the debt faster in later periods. [2 marks]