Practice worksheet | Financial mathematics

Annuities providing an income

Name: _____ Date: _____

6 questions | 18 marks

1. Find the capital required for 8 end-of-year withdrawals of AUD 3,000 at 3%. [3 marks]

2. AUD 12,000 must provide 24 equal month-end withdrawals at zero interest. Find each withdrawal. [3 marks]

3. An account starts with AUD 40,000, earns 4% annually, and pays AUD 4,000 at each year end. Find the balance after 5 withdrawals. [3 marks]

4. Compare the starting capital for five AUD 2,000 withdrawals at 5% when they occur at year ends and at year beginnings. [3 marks]

5. A retirement model has AUD 100,000 earning 4% annually and pays AUD 6,000 at year end. Find the balance after the first year and explain why it falls. [3 marks]

6. An exactly funded annuity has 6 withdrawals of AUD 2,500 still to come, starting next year, at 4%. Find its present balance. [3 marks]