Lesson 6: Compound Interest

Year 10 Mathematics Unit 1 — Block A | Worksheet

Name _____ Date _____ Class _____

Multiple Choice

Q1. $5,000 is invested at 4% p.a. compounded annually for 3 years. What is the total amount?

A) $5,600.00 B) $5,624.32 C) $5,600.32 D) $6,200.00

Q2. $10,000 is invested at 6% p.a. compounded semi-annually for 2 years. What is the total amount?

A) $11,200.00 B) $11,255.09 C) $11,236.00 D) $11,300.00

Q3. Which compounding frequency gives the highest return for the same nominal rate: annual, semi-annual, quarterly, or monthly?

A) Annual B) Semi-annual C) Quarterly D) Monthly

Q4. A car worth $25,000 depreciates at 15% p.a. using reducing balance. What is its value after 2 years?

A) $18,062.50 B) $17,500.00 C) $19,000.00 D) $21,250.00

Q5. After how many years will $8,000 invested at 5% p.a. compounded annually first exceed $10,000?

A) 3 years B) 4 years C) 5 years D) 6 years

Short Answer

Q6. Calculate the total amount after 3 years when $6,500 is invested at 4.5% p.a. compounded annually. *(2 marks)*

Q7. $15,000 is invested at 3.6% p.a. compounded quarterly for 4 years. Calculate the final amount correct to the nearest cent. *(3 marks)*

Q8. Explain the difference between simple and compound interest, and calculate how much more compound interest earns on $5,000 at 4% p.a. over 5 years compared to simple interest. *(3 marks)*

Key Formulas

- Write any formulas you need here.