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| Name:  Class: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  SCORE:  / 52    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | **Year 12 Essential Mathematics Unit 2**  **Test 5 2020**  **Topic – Interest**  ***Full working out MUST be shown to get full marks for each question.*** | |
| **Total Time:** | 50 minutes |  |
| **Weighting:** | 5% |
| **Equipment:** | To be provided by the student: Pen, pencil, ruler, scientific calculator, 1 single sided page of A4 notes | |

1. If I invest $4,500 at 5% p.a. simple interest for 4 years, how much interest will I earn?

(2 marks)

1. If I invest $15,000 at 2.75% p.a. simple interest for 30 months, how much interest will I earn and how much will my total investment be worth in total at the end of the term?

(4 marks)

1. A loan of $2500 was repaid over 3 years with loan repayments totalling $2812.50. What was the annual rate of interest? (4 marks)
2. Sarah wishes to invest $2500 for 4 years at 4.5% compounding annually. How much interest will she earn after 4 years? (3 marks)
3. If Janet invested $600 for 2 years earning 3.25% p.a. interest compounded every 6 months. How much will she have at the end of the term? (3 marks)
4. Nicole borrowed $1800 from a finance company for 2 years at 19% p.a. simple interest. What will be her repayments each month? (4 marks)
5. $1200 is placed in an account at 4% compounded annually for 2 years. It is then withdrawn at the end of the two years and placed in another bank at the rate of 5% compounded annually for 4 years. What is the balance in the second account after the 4 years? (4 marks)
6. Colin invests $5000 for 5 years at 5.25% p.a. How much more would he collect at the end of the 5-year period if the money invested is compounding monthly rather than compounding annually? (6 marks)
7. Kim has $18 000 to invest for 2 years. She has the following options:
8. A building society account, paying a return of 4.56% per annum with monthly rests.
9. A business venture with guaranteed return of 3.65% p.a. and interest paid daily.

Advise Kim which option to take: (6 marks)

1. Jason borrows $10 000 to buy a new car at a rate of 3.5% compounded annually. He pays off $2000 at the end of each year. How much money will Jason have left to pay after the first year? (4 marks)

1. Michelle takes out a home loan for $455 000 with an interest rate of 4.55% compounded monthly. She makes monthly repayments of $1800. Use this information to complete the table below, showing all your working out in the table.

(12 marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month** | **Starting Balance** | **Interest** | **Repayment** | **End of month balance** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

END OF TEST 😊