**Math 11 AWP Unit 3 – Investing and Borrowing Money**

Assignment 1 – Compound Interest and the Rule of 72

1. Calculate the amount of ***simple*** interest earned and the final value for each of the following investments
2. Principal: $400.00 Rate: 1.25% per annum Term: 8 years
3. Principal: $750.00 Rate: 2.75% per annum Term: 5 years
4. Principal: $1000.00 Rate: 4.50% per annum Term: 10 years
5. Principal: $1200.00 Rate: 3.95% per annum Term: 9 years
6. Calculate the amount of ***compound*** interest earned and the final value for each of the following investments
7. Principal: $400.00 Rate: 1.25% per annum Term: 8 years
8. Principal: $750.00 Rate: 2.75% per annum Term: 5 years
9. Principal: $1000.00 Rate: 4.50% per annum Term: 10 years
10. Principal: $1200.00 Rate: 3.95% per annum Term: 9 years
11. Use the table to show how much a deposit of $1000.00, invested at 3.85% per annum, compounded semi-annually for 2 years, would be worth at the end of each compounding period

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| INTEREST TABLE |
| Interest period | Investment value at beginning of period | Interest earned ($I=Prt$) | Investment value at the end of the period |
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1. Tameka deposited $4000.00 into an investment account that offers 3.00% interest per annum, compounded daily.
2. How much will her investment be worth after 3 years?
3. How much will it be worth in 10 years?
4. An investment offers a rate of 2.80% per annum, compounded annually.
5. Use the Rule of 72 to determine about how long it will take for the value to double. Round your answer to the nearest whole year.
6. Use the compound interest formula and an investment of $1000.00 to check your answer to a). What is the value after that number of years?
7. John has a $1000.00 investment that offers an interest rate of 2.50% per annum, compounded monthly.
8. If he invests it for 5 years, how much will the investment be worth at the end of the term?
9. Approximately how long will it take for his investment to double in value?
10. Which is the better investment over 5 years:
	* An investment that offers a rate of 1.90% per annum, compounded annually; or
	* An investment that offers a rate of 1.75% per annum, compounded monthly/
11. Calculate the final value of an investment of $5000.00 over a term of 10 years and a rate of 2.60% at the following compounding periods:
12. Annual;
13. Quarterly;
14. Monthly; and

1. Daily.