Name: _____ Date: _____

MBF 3C **Assignment: Simple & Compound Interest**

Answer each of the following in the space provided. If you need them, required formulas are posted in the classroom. Show each step in the process.

Part A-Knowledge & Understanding

1. If you invest 1759.76 at 8% ***simple interest***, how much will your investment be worth …

| Time | Amount of the investment |
|---|---|
| … in 1 year? | |
| … in 18 months? (Recall: Time is to be in years) | |

2. If you invest 1759.76 at 8% ***compound interest***, compounded annually, how much will your investment be worth…

| Time | Amount of the investment |
|---|---|
| … in 1 year? | |
| … in 18 months? (Again, time in years) | |

3. When money is invested at 5% per year compounded semi-annually, for five years, in the formula $A = P(1 + i)^n$… (**circle one**)

a) n = 5 and i = 0.05

b) n = 5 and i = 0.025

c) n = 10 and i = 0.025

d) n = 10 and i = 0.05

**(OVER →)**

4. Consider the following scenario:

*$13 000 is invested at 7% compounded semi-annually for 4 years.*

a) How many interest periods (*f* x *t*) will there be over the term of this investment? _____

b) What will be the interest rate per interest period, $\frac{i}{f}$ (as a decimal)? _____

Part B-Application

1. Erik needs to borrow $2000. Which loan should he take?

A: $2000 for three years at 10% per year, compounded *semi-annually*

B: $2000 for three years at 9.2% per year, compounded *quarterly*

**Justify your response.**

Bonus-Challenge

Answer a) or b) or both!

a) About how long would it take $1 to double if it earns 4% per year, compounded annually?

b) About how long would it take $1 to double if it earns 4% per year, compounded semi-annually?

**Show your thinking.**