Name: _____

## Part II

Part II of this assignment is to be completed using the TVM Solver on the Graphing Calculators.

**TVM Solver**: We can use the TVM Solver to solve for any variable in our compound interest formula.

To get to the TVM Solver press: [APPS] → [ENTER] → [ENTER]
The list of the variables and what each variable represents is below:

**N** = Number of years of investment
**I%** = Interest rate as a percent (**not decimal**)
**PV** = Principle (PV)
**PMT** = Always set to 0
**FV** = Final amount or Future Value of investment (FV)
**P/Y** = Always set to 1
**C/Y** = Number of compounding periods per year

*****For the solver to work, set PV as negative*****

To solve for a variable, highlight the variable you are interested in then press:
[ALPHA] → [ENTER]

1. If $5,750 is put into an investment that compounds bi-weekly. How many years would it take for the investment to reach $10,000 at each of the following interest rates? Round to two decimal places. **[6 K]**

| 0.25% | 0.5% | 2.5% | 5% | 9.9% | 15% |
|---|---|---|---|---|---|
| | | | | | |

a) What happens to the value of N as the value of I% increases? **[1 C]**

b) Explain why this happens. **[2 C]**

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2. If $20,500 is invested at 9.25% interest, what is the investment worth after 25 years (rounded to two decimal places) if interest is compounded: **[6 K]**

| Daily | Weekly | Bi-Weekly | Monthly | Quarterly | Annually |
|---|---|---|---|---|---|
| | | | | | |

a) What happens to the value of FV as the number of compounding periods per year decreases? **[1 C]**

b) Explain why this happens. **[2 C]**

3. What original investment (rounded to two decimal places) is required to end up with $400,000 if you invest at 6.5% interest compounded daily for:

| 30 years | 20 years | 10 years | 5 years | 18 months | 6 months |
|---|---|---|---|---|---|
| | | | | | |

a) What happens to the value of PV as the value of N decreases? **[1 C]**

b) Explain why this is the case. **[2 C]**