

## Lesson Two: TVM Solver and Investments

### GOALS:

- Determine, using technology, the total value and total interest earned on investments with and without regular payments.
- Solve, using technology, for specific variables involved in an investment problems, such as interest rate, term of investment, amount of principal.

Using the compound interest formula can be challenging but fortunately, the TI-84+ graphing calculator has a program which can calculate compound interest or any of the other variables in the formula. This program is called the **TVM Solver** and is found in the APPS menu under Finance.

It is accessed by entering APPS → FINANCE → TVM Solver. There are several variables on this menu which will help us solve a variety of problems that involve compound interest. When you first enter the program, the screen should look like this:

```
N=0
I%=0
PV=0
PMT=0
FV=0
P/Y=1
C/Y=1
PMT:BEGIN
```

### Explanation of the TVM Solver menu:

**N** = the total number of payment periods of the loan or investment.

**I%** = the annual interest rate in percent form.

**PV** = the present value of the loan or investment.

**PMT** = payment (if one is to be made regularly).

**FV** = the final/future value of the loan or investment.

**P/Y** = the number of payment periods received or made in one year.

**C/Y** = the number of compounding periods per year.

**Note:** **PV** and **FV** must have opposite signs. Generally, we enter in **PV** as negative which results in a positive **FV**.