

Using the TI-83/84 series TVM solver for loan calculation:

1.) On the TI-83, press 2nd, then FINANCE, then select 1:TVM Solver. On the TI-83 plus and TI-84, press APPS, then 1:FINANCE, then 1:TVM Solver. You should see the screen below:

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

N: Number of compounding periods. Type this in as number of years times number of compounding periods per year.

I%: Interest rate. Type this in as a rate, NOT as a decimal.

PV: Previous Value. This is the starting value of the account. If it's a loan, the amount will be positive, the amount you owe. If it's a savings account, the amount will be negative, the amount you (take out of your pocket and) put in. If you don't start the savings account with a deposit, this value will be zero.

PMT: Payment amount. Since this is coming out of your pocket, it's negative. If you've started a savings account with a deposit, and don't plan to make regular deposits, this will be zero.

FV: Future value. For savings, this will be the value after a given number of compounding periods. For a loan, this should be 0.

P/Y: Payments per year. This number should be the same as the next item, unless specified otherwise in the problem.

C/Y: Compounding periods per year. See above.

PMT: END BEGIN: Will the payments be due at the beginning or end of the month.

2.) Now, suppose you are taking out a 5-year loan on \$25000 at 6% annual interest compounded monthly and you want to know the monthly payment. Fill in the values on the TVM Solver screen as shown:

(Enter N as 5 years * 12 compounding periods per year)

```
N=60
I%=6
PV=25000
PMT=■
FV=0
P/Y=12
C/Y=12
PMT: END BEGIN
```

3.) Now, move the cursor to PMT, press the green ALPHA key, then ENTER. Your payment will show up as a negative number (since it's coming out of your pocket):

```
N=60
I%=6
PV=25000
PMT=-483.32003...
FV=0
P/Y=12
C/Y=12
PMT: 2ND BEGIN
```

4.) Suppose you know you can afford a \$250 per month payment on a 60 month loan at 6% annual interest compounded monthly. You can enter N as 60, since they didn't give you a number of years. Fill out the TVM Solver screen as shown:

```
N=60
I%=6
PV=0
PMT=-250
FV=0
P/Y=12
C/Y=12
PMT: 2ND BEGIN
```

5.) To find how much you can afford to borrow, move the cursor to PV, press the green ALPHA key, then ENTER. The amount you can afford to borrow is shown:

```
N=60
I%=6
PV=12931.39019
PMT=-250
FV=0
P/Y=12
C/Y=12
PMT: 2ND BEGIN
```