Solving Compound Interest Problems on the TI-83 Graphing Calculator

1. You have $10,000 to invest. You have found a bank that will pay you 4.5% compounded monthly. What will your investment be worth after each time period?

   What variable are you solving for? What variable are you changing?

10 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

20 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

30 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

40 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

2. You are investing $1500 that you want to grow to $2500 in 5 years. What interest rate do you need (to two decimal places) if interest is compounded by each schedule?

   What variable are you solving for? What variable are you changing?

Daily	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

Weekly	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

Monthly	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

Semi-Annually	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

3. How long would it take a $25,000 investment to double if it is compounded weekly at each interest rate below?

   What variable are you solving for? What variable are you changing?

0.5%	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

2.5%	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

5.5%	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

9%	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

4. You need to have $3,000 to buy a used car. You can invest in a GIC that pays 6.2% compounded daily. How much do you need to invest now to get your money in each given period of time?

   What variable are you solving for? What variable are you changing?

6 months	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

18 months	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

5 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	

7 years	
N	
I%	
PV	
PMT	0
FV	
P/Y	1
C/Y	