

Compound Interest

Business Math

Use the TVM app on your calculator to solve each problem.

N	number of payments
I%	annual interest rate
PV	present value
PMT	payment
FV	future value
P/Y	payments per year
C/Y	cycles per year (interest earned)
PMT: End	payments are made at the end of the month

1. You want to buy a nice car. You open a savings account with the \$3000 you saved from your summer job. The savings account earns 2.5% interest compounded monthly. Every month you deposit \$200. How much money do you have after two years?
2. You deposited \$5000 in an account that pays 4.6% interest compounded monthly. How much money would you have in your account after five years?
3. You decide to save \$250 per month in an account that pays 4% interest and is compounded monthly. How much money will you have in the account after 10 years?
4. You have \$2000 to open a savings account. The accounts pays 3% interest compound monthly. You want to have \$10,000 in ten years. How much should you add to the account each month (solve for the PMT)?
5. You save \$100 per month for 40 years. Your account earns 4.5% interest compounded monthly. How much money do you have in the account after 40 years?
6. The bank will pay 2.8% interest compounded monthly. You open the account with \$500 and deposit \$100 every month. How many months will it take to get a balance of \$10,000 (Solve for N)?
7. When you have a child, you want to start saving for her college education. If you save \$100 per month for 18 years and the bank pays 2.5% interest on the savings compounded monthly, how much would she have when she goes to college?
8. You take an economics class in college and it gets you interested in index funds. You find a fund that typical earns 7.35%. If you invest \$200 per month in this fund for 10 years, how much money will you have?
9. You want to be a millionaire by the time you are 50 years old. If you can earn an average of 11% on your investments, how much would you have to invest each month to reach your goal? Use your current age.