

2.1-2.3: Spreadsheets, Simple and Compound Interest and Savings PlansGroup Activity

Use a spreadsheet to work on these problems.

These formulas will be given to you on quizzes and tests. Write down the spreadsheet syntax to show your work. For example: =FV(.05/12, 2*12, 0, 1000).

Answer each question in a complete sentence.

1. Your uncle is giving you a simple interest loan of \$500 for one year at 4% interest. What is the total amount you will owe him?

Financial Formulas

=principal + principal*rate*years

=FV(rate, nper, pmt, [pv], [type])

=PV(rate, nper, pmt, [fv], [type])

=principal*EXP(rate*years)

=EFFECT(nominal rate, periods per year)

=PMT(rate, nper, pv, [fv], [type])

2. You borrowed \$1500 from another relative. She charged you 5% APR, compounded monthly. If you paid her back 2 years later, how much money did you give her?

3. You got a bonus of \$7,500 and you want to start a college fund for your child. You find an account paying 9.75% APR compounded quarterly. If your child just turned two years old, how much will you have when they turn 18? How much of that account balance is interest?

4. Calculate how much you would have in problem 3 above if it was compounded continuously instead of quarterly.

5. If you are considering a credit card with an APR of 27.49%, compounded daily, what annual rate are you effectively paying?

6. How much would you need to deposit today to have one million dollars if you can find an account that pays 10% interest compounded daily for 50 years?

Challenge Problem

Sage deposited \$2498 into an account paying 7.05% APR, compounded quarterly. Dionne deposited \$2994 into an account paying 5.19% APR, compounded monthly. How many years will it take for their balances to (nearly) match?

Write a spreadsheet formula for each person, using a cell reference for the number of years. Then you can copy the formula down using the fill-down feature.

Year	Sage	Dionne
1		
2		
3		

Round-Robin Problems. Choose two people from your group to travel together and two to stay. Use the space below to write your formula for each problem.

1.
2.
3.
4.
5.