



☞ **Example 1:** After Andrew had his money in an account for 5 years, he had \$135 in total. If the account offered a .4% simple interest rate, how much did Andrew deposit initially?

☞ **Example 2:** Samuel would like to invest \$1,200. He found a bank that offers a .1% interest rate and compounds quarterly for savings accounts. If he decides to invest in this account, how much money will be in his account after 2 years?

1. Alexander deposited \$2,220 into a savings account exactly two years ago. He earned .25% interest, compounded monthly. How much money is in his savings account now?

2. Austin invested some money into a simple interest account with a .3% interest rate. After 3 years, he had \$927.75. How much did Austin invest originally?

3. Dara has \$750 she would like to deposit into a savings account. She is trying to decide between Mountain Bank and Valley Bank. Valley Bank offers a simple interest rate of .15% per year, and Mountain Bank offers a .2% interest rate, compounded quarterly. Dara would like to withdraw her money after 4 years to begin paying for college tuition. Which bank should Dara choose? Explain.

**4. An online savings account accrues simple interest annually. Amanda deposits \$700 into such an account.  $S(t)$  represents the amount Amanda has saved after  $t$  years.  $S(3) = 731.50$ .**

a. Write a function that could be used to determine the amount of money Amanda has saved over time.

b. Another online bank accrues compound interest annually at a rate of 1.5%. Determine the initial amount Amanda would have to deposit in this account for both accounts to have the same amount of money after five years.

\* **Interest Formulas Exit Slip** \*

☞ Casey would like to invest \$825 into a savings account. He has a choice of three banks, with savings plans as outlined below. Casey would like to withdraw his money from his account three years from now, so he can put it towards his first college tuition bill.

**First Nation Bank**

.5% interest rate,  
compounded semiannually

**Great Plain Bank**

.45% simple interest  
rate

**Bravery Bank**

.35% interest rate,  
compounded monthly

- Which bank should Casey choose? Thoroughly support your choice.