SECTION 5-5 Compound Interest

Interest that you earn in a savings account during an interest period is added to your account. The new balance is used to calculate the interest for the next interest period. Compound interest is interest earned not only on the original principal but also on the interest earned during previous interest periods.

\[ \text{Amount} = \text{Principal} + \text{Interest} \]
\[ \text{Compound Interest} = \text{Amount} - \text{Original Principal} \]

1. Michael Arthur deposited $2,900 in a new regular savings account that earns 5.5 percent interest compounded semiannually. He made no other deposits or withdrawals.
   a. What was the amount in the account at the end of 1 year?
   b. What is the compound interest?

2. Trella Alcala deposited $1,950 in a new credit union savings account on the first of the quarter. The principal earns 4.25 percent interest compounded quarterly. She made no other deposits or withdrawals.
   a. What was the amount in her account at the end of 6 months?
   b. What is the compound interest?

3. Joseph Black Bear Renfer deposited $2,400 in a new savings account on March 1. The savings account earns 6.0 percent interest compounded monthly.
   a. How much was in the account on June 1?
   b. What is the compound interest?

4. Jeanne Crawford had $9,675.95 deposited in an account paying 6 1/4 percent interest compounded semiannually.
   a. How much would she have in her account 2 years later?
   b. What is the compound interest?

5. You deposit $2,500 in a special savings account. The account earns interest at a rate of 3.25 percent compounded monthly.
   a. What amount will be in your account at the end of 5 months if no deposits or withdrawals are made?
   b. What is the compound interest?