6.4 Exercises

Savings Account **In Exercises 1–4, suppose that you deposit $1000 into a savings account.** ***(See Example 1.)***

1. The savings account earns 5%, compounded monthly. Find the balance in the account after each time period.

a. 10 years

b. 20 years

2. The savings account earns 6%, compounded monthly. Find the balance in the account after each time period.

a. 10 years

b. 20 years

3. The savings account earns 5.5%, compounded monthly. Your friend deposits $700 into a savings account that earns 7.5%, compounded monthly. Which account has the greater balance after 15 years?

4. The savings account earns 6.5%, compounded monthly. Your friend deposits $600 into a savings account that earns 8%, compounded monthly. Which account has the greater balance after 40 years?

5. **Purchase of Manhattan** According to legend, in 1626, Peter Minuit purchased Manhattan Island from Native Americans for $24 worth of trade goods. Suppose the $24 had been deposited into a savings account earning 7%, compounded annually. How much would be in the account in 2014? *(See Example 2.)*

6. **Gift for the Future** You deposit $3000 into a savings account that earns 5%, compounded annually, for future generations of your family. How much will be in the account after 200 years? *(See Example 2.)*

7. **Investment by an Ancestor** Suppose that 350 years ago, 1 of your ancestors deposited $1 into a savings account earning 6%, compounded annually. How much would be in the savings account today? *(See Example 2.)*

8. **Compounding a Penny** Suppose that 500 years ago, the equivalent of 1 penny had been deposited into a savings account earning 8%, compounded annually. How much would be in the savings account today? *(See Example 2.)*