

Pension Plan In Exercises 9–12, use the information below.
(See Example 3.)

You start your working career when you are 22 years old. Each month, you deposit \$50 into a pension plan that compounds interest monthly. You continue making deposits into the plan until you are 67 years old.

9. The plan earns 3%. Find the balance in the account.
10. The plan earns 5%. Find the balance in the account.
11. The plan earns 6%.
 - a. Find the balance in the account.
 - b. Suppose that you deposit \$150 each month instead of \$50. Find the balance in the account.
 - c. Compare the account balances in part (a) and part (b).
12. The plan earns 7%.
 - a. Find the balance in the account.
 - b. Suppose that you wait until you are 32 years old to begin making deposits. Find the balance in the account.
 - c. Compare the account balances in part (a) and part (b).



13. 401(k) Plan You start your working career when you are 22 years old. Your beginning salary is \$50,000 per year. Your employer offers a 401(k) matching retirement plan that amounts to 10% of your salary (5% from you and 5% from your employer). Assume that your salary increases 2% each year and that the 401(k) plan averages 6% annual returns for the life of the plan. (See Example 4.)

- a. How much have you and your employer contributed to your 401(k) plan when you are 70 years old?
- b. How much interest has your 401(k) plan earned when you are 70 years old?
- c. What is the total balance in your 401(k) plan when you are 70 years old?



14. 401(k) Plan You start your working career when you are 22 years old. Your beginning salary is \$45,000 per year. Your employer offers a 401(k) matching retirement plan that amounts to 10% of your salary (5% from you and 5% from your employer). Assume that your salary increases 3% each year and that the 401(k) plan averages 8% annual returns for the life of the plan. (See Example 4.)

- a. How much have you and your employer contributed to your 401(k) plan when you are 67 years old?
- b. How much interest has your 401(k) plan earned when you are 67 years old?
- c. What is the total balance in your 401(k) plan when you are 67 years old?