



**Retirement Plan** In Exercises 15–18, use the information below. (See Example 5.)

You retire at age 67. Your 401(k) retirement plan has a balance of \$1 million and compounds interest monthly.

15. The account earns 6%, and you want an income of \$75,000 a year.
  - a. How much have you withdrawn in total from your account after 10 years?
  - b. How much interest has the account earned after 10 years?
  - c. After 10 years, what is the balance in your account?
16. The account earns 8%, and you want an income of \$90,000 a year.
  - a. How much have you withdrawn in total from your account after 20 years?
  - b. How much interest has the account earned after 20 years?
  - c. After 20 years, what is the balance in your account?
17. The account earns 5%. How many years can the account support withdrawals of \$60,000 a year?
18. The account earns 5%. How many years can the account support withdrawals of \$85,000 a year?



**Defined Benefit Plan** In Exercises 19 and 20, use the information below. (See Example 6.)

You are 55 years old and you have worked for a government municipality for 30 years. Your defined benefit retirement plan will pay you 2% of your average income for the last 3 years for each year you have worked. Your average annual income during the past 3 years is \$72,000. Suppose you live to age 85.

19. Your salary will increase by 1% each year. At what age should you retire to receive the greatest retirement income?
20. Your salary will increase by 3% each year. At what age should you retire to receive the greatest retirement income?

