

End of Chapter Answers

Chapter 1

1. Using the rule of 72, approximate the following amounts. (Obj. 1)
 - a. If the value of land in an area is increasing 6 percent a year, how long will it take for property values to double?
About 12 years ($72 / 6$)
 - b. If you earn 10 percent on your investments, how long will it take for your money to double?
About 7.2 years ($72 / 10$)
 - c. At an annual interest rate of 5 percent, how long will it take for your savings to double?
About 12 years ($72 / 5$)
2. In the early 2000s, selected automobiles had an average cost of \$15,000. The average cost of those same automobiles is now \$18,000. What was the rate of increase for these automobiles between the two time periods?
 $(\$18,000 - \$15,000) / \$15,000 = .20$ (20 percent)
3. A family spends \$34,000 a year for living expenses. If prices increase by 4 percent a year for the next three years, what amount will the family need for their living expenses after three years?
 $\$34,000 \times 1.12 = \$38,080$; or using Exhibit 1-A: $\$34,000 \times 1.125 = \$38,250$
4. Ben Collins plans to buy a house for \$120,000. If that real estate is expected to increase in value by 5 percent each year, what will its approximate value be seven years from now?
 $\$120,000 \times 1.35 = \$162,000$; or using Exhibit 1-A: $\$120,000 \times 1.407 = \$168,840$
5. What would be the yearly earnings for a person with \$6,000 in savings at an annual interest rate of 5.5 percent?
 $\$6,000 \times 0.055 = \330
6. Using time value of money tables (Exhibit 1–3 or chapter appendix tables), calculate the following:
 - a. The future value of \$450 six years from now at 7 percent.
 $\$450 \times 1.501 = \675.45 (Exhibit 1-A)
 - b. The future value of \$800 saved each year for 10 years at 8 percent.