

Chapter 7 Practice Test

For questions 1 to 4, answer true (T) or false (F).

1. A compound interest investment will always earn more interest than a simple interest investment with the same annual interest rate.
2. For 1 year, interest earned at 3.5% per year, compounded semi-annually, is less than interest earned at 3.5% per year simple interest.
3. For 1 year, simple interest and interest compounded annually, both at 6% per year, add the same amount of interest to an initial investment.
4. The TVM Solver reduces the amount of time needed to make financial calculations.

For questions 5 to 7, select the best answer.

5. Which values of i and n can be substituted into the compound interest formula to determine the future value of an investment at 8% annual interest, compounded quarterly, for $2\frac{1}{2}$ years?
A $i = 8\%$, $n = 2.5$ **B** $i = 2\%$, $n = 10$
C $i = 4\%$, $n = 10$ **D** $i = 2\%$, $n = 5$
6. \$3000 is invested at 4% per year, compounded semi-annually, for 2 years. Which simple interest rate will earn the same amount of interest over the same time period?
A 4% per year **B** 3.85% per year
C 4.12% per year **D** 8% per year
7. A TVM Solver can be used to find
A interest rate **B** present value
C number of years **D** all of the above

8. \$25 000 is required in 10 years. How much needs to be invested today at 6% per year, compounded semi-annually?
9. Bob borrowed money for 3 years at 4% per year, compounded quarterly. If he paid \$7549.73 at the end of the 3 years, how much was the loan?
10. Create a table of values and draw a graph to show how \$800 will increase in value over 7 years, invested at
a) 10% simple interest
b) 10% per year, compounded annually
11. Jo has a loan of \$3175 that is due in 4 years. If the interest rate is 4.3% per year, compounded semi-annually, how much might her creditor be willing to accept today to pay off the loan?
12. How many years would it take for \$3000, invested at 4.2% per year, compounded semi-annually, to grow to \$5000?
13. Stella invests \$7000 at an interest rate of 4.7% per year, compounded semi-annually. In how many years will her investment be worth \$10 000?
14. David invests \$4000 in a plan with interest compounded monthly. What yearly interest rate will increase the value of his investment to \$5000 after 5 years?
15. Which interest rate will double an investment more quickly?
 - 8% per year, compounded semi-annually
 - 7.2% per year, compounded monthly