

Capital Budgeting

Using Microsoft Excel, answer the following questions. Submit as a single file. Separate each question in sheets.

Questions:

- **5-11.** How much will \$1,000 invested at 2 percent simple interest be worth in 10 years? What will it be worth if the interest rate is 3 percent?

NOTE: For Exercises 5-14 through 5-20, use info below:

Solve using a spreadsheet program such as Excel. Indicate the spreadsheet formula showing numeric values rather than cell references. For example, for the value that \$100 today could grow to in 2 years, assuming 10 percent annual compounding, the spreadsheet solution formula would be = FV(10%, 2, 0, 100). Note that since there is no annuity payment (PMT) in this problem, it is necessary to show the blank between two commas or a zero after the number of periods. In addition, answer the questions using formulas with cell references. Solve using a financial calculator. (optional)

- **5-14.** How much will \$20,000 invested today at 3 percent interest be worth in 5 years if it is compounded annually? Monthly?
- **5-15.** If we receive \$5,000 eight years from now, how much is that equivalent to today, if we believe that we can earn 5 percent on other opportunities?
- **5-17.** How much must you put into a 5 percent investment annually to have \$75,000 eight years from now? Assume all payments are made at the end of each period.
- **5-18.** If you could put \$5,000 into a 6 percent investment at the end of each year, how much money could you take out at the end of 7 years?
- **5-32.** The town of Millbridge has to make a decision on replacing its garbage truck. It has narrowed the choice down to two different models. Model A will initially cost \$80,000 and then will cost \$4,100 per year to operate for its 20-year life. Model B will initially cost \$100,000 and then will cost \$3,600 per year to operate for its 30-year life. Use the annualized cost approach to determine which is a better choice. Assume a discount rate of 6 percent per year.
- **5-35.** The town of Millbridge has just agreed to pay a pension to the town clerk. The pension will be \$40,000 per year for the next 20 years. Dwight Ives, the town manager, has decided that the town should put aside enough money today to pay for the entire pension. He has argued that the town will not receive the clerk's services in the future, so future taxpayers should not have to pay the pension. How much must be put aside, assuming the town earns 6 percent compounded annually? Does this funding approach make sense to you?