

1) [45 points total]: Annuity Contribution Worksheet

Tor makes annual contributions to an annuity account that has a guaranteed rate of return of 4.75% APR. At the end of the first year, Tor makes a contribution of \$3000.00. Tor increases his annual contribution by 0.65% every year for a 25 year period. Contributions are applied to the annuity in a single investment at the end of each year.

Create an excel worksheet that clearly expresses the annual valuation of the above annuity. The worksheet must include the information listed below. You may choose to create additional columns used to calculate intermediate values, but the constants given in the above description may each only be entered ONCE as constants in the worksheet. All other appearances or usages of the assumptions above must be cell references. **If you choose to create any additional columns, then any equations used in these columns MUST ALSO BE ENTERED AS TEXT in some clearly labeled location of the worksheet in order to receive credit for that calculation.**

- a) [5 Points]: **Clearly label** cells that contain the given **First year contribution amount**, the **Annual rate of contribution increases**, and **Annual investment return rate**.
- b) [5 Points]: Include a table with a row for each year of the annuity.
- c) [8 Points]: The table created in part b must include a column that displays the **contribution amount** made in dollars at the end of that year. All values in this column must be calculated from an equation that **DOES NOT USE ANY CONSTANTS**. The first row of the equation may be a special case. The equation entered in the second row must be filled down through each year of the annuity to give the correct contribution amount for that year. **This equation MUST ALSO BE ENTERED AS TEXT in some clearly labeled location of the worksheet in order to receive credit for that calculation.**
- d) [8 Points]: The table created in part b must include a column that displays the **cumulative contribution amount** made from the first year through the year corresponding the each row of the table. This amount must not include interest, just the dollars contributed. All values in this column must be calculated from an equation that **DOES NOT USE ANY CONSTANTS**. The first or second row of the equation must be filled down through each year of the annuity to give the correct cumulative contribution amount through that year. **This equation MUST ALSO BE ENTERED AS TEXT in some clearly labeled location of the worksheet in order to receive credit for that calculation.**
- e) [9 Points]: The table created in part b must include a column that displays the **value of the annuity** at the end of each year. All values in this column must be calculated from an equation that **DOES NOT USE ANY CONSTANTS**. The first or second row of the equation must be filled down through each year of the **value of the annuity** at the end of that that year. **This equation MUST ALSO BE ENTERED AS TEXT in some clearly labeled location of the worksheet in order to receive credit for that calculation.**
- g) [10 points]: The worksheet must be neat, clear, easy to read, use consistent formatting, and well organized. This leaves much room for variations. For example, you may or may not choose to use a larger, bold, italic or different font for your table headers. You may or may not use a colored background for headers, or for every other row or for some other purpose. You may or may not choose to display two decimal places for the dollar amounts. You should, however, be consistent in your formatting, all text should fit within its cell, and words should not be broken across lines.

2) [45 points total]: Financial Forecast Worksheet

You are planning to start a retail Internet sales company that will sell a single product: a high-end vacuum cleaner. In 2009, YOUR cost for purchasing one of these amazing vacuum cleaners is \$650.00. You estimate that you can sell 500 units in 2009 and that you can increase your sales by 17% each year through 2010, 2011, and 2012. Since the vacuum cleaners arrive in bulk, you rent a storage unit with a one year lease at a cost of \$2000 for the full year. The cost of setting up and maintaining the web site is \$1000 for the first year. You estimate that your cost for the vacuum and for the storage rental will both increase at the current inflation rate of 3.85% annually. You expect that the cost of maintaining your web site increases 1% annually.

Using the data above and tab 2 of the workbook created in part 0, create a partial financial forecast. **Note: You can only create a partial financial forecast because you are not given the selling price of the vacuum. Therefore, you have no way of knowing the profit. This partial financial forecast only includes costs. Real financial forecasts (and the one we created in lab) include profit. In the interest of time, the profit part is skipped here.**

- a) [11 points]: The partial financial forecast must be professional looking. For example, all dollar amounts must be formatted with a \$ symbol and the placement of the \$ symbol must be consistent (not left aligned in some cells and right aligned on others).
- b) [6 points]: There must be a separate section for **Assumptions** and **Expenses**.
- c) [6 points]: In the expenses section, separate **Fixed Costs** from **Marginal Costs**.
- d) [10 points]: In the expenses section, there must be a row showing the **Total Costs** for each year. This must be an equation entered in the 2009 year that can be **filled across** through 2012. This equation must NOT CONTAIN ANY CONSTANTS. **Copy this equation as text to some clearly labeled location on the spreadsheet.**
- e) [2 points]: **The first year** of expenses should be cell references to the Assumptions.
- f) [10 points]: **The second year** of the expenses must be equations that can be **filled across** through 2011 and 2012. The equations must NOT CONTAIN ANY CONSTANTS. **Each equation used in 2010 must be copied as text to some clearly labeled location on the spreadsheet.**