

A dictionary and/or a notebook may be used on this exam. The exam will require the use of a UNM Windows XP computer, Microsoft Excel and a printer. The exam must be printed on a single side of an 8.5x11 inch sheet of paper, and turned-in. A photo ID is required to turn-in the exam. The only computer applications allowed to be open and/or used during the exam are Microsoft Word, Microsoft Excel, and the *off-line*, Microsoft help systems. Students may NOT use the Internet including Internet Explorer, Firefox, and on-line Help. Cell phones must be turned off. Students cannot answer a cell phone in class nor can they exit the room to answer a cell phone during the exam. A student may NOT leave the room (even to use the restroom) for any reason during the exam until that student has turned in the exam. Once an exam is turned in, no further work may be done on it. Time limit: 50 minutes.



Throughout this exam, no equations may include “hard coded” assumptions (CONSTANTS). As usual, this prohibition does not apply to universal constants such as using “7” for the number of days in a week, nor “1” as a unit increment.

Part 0 - Setting up the worksheet:

- ✓ Create Microsoft Excel worksheet with the formatting described below. All of the worksheet must fit on a **single side of a single page**. You may choose to use a portrait or landscape page layout.
- ✓ In each column of the **first row** of your one page spreadsheet, enter the letter of that column. Only label the columns that print on one page of the worksheet.
- ✓ In the **first column** of each row (starting with the second row), enter the row number.
- ✓ In row 2, enter your **first and last name in 14-point, bold, Italic, Arial font**.

Thus, the first column and the first two rows of the worksheets should look like the screen capture below:

	A	B	C	D	E	F	G	H	I	J
1	A	B	C	D	E	F	G	H	I	J
2	2	<i>Your First Name and Last Name</i>								
3	3									
4	4									
5	5									
6	6									
7	7									

Part 1 - Annuity Scenario Assumptions Table:

When Rowan was 22 years old she accepted a county fire fighting job with an annual salary of \$55,000. She stayed with county for 25 years and now is eligible for retirement. During her 25 years of service with the county, she earned a 2.47% salary raise at the end of each year. Aside from her pension, at the end of every year she placed 7.0% of her annual salary into a very conservative 401K fund that maintained its guaranteed rate of return of 5.27% APR for all 25 years. Assume all new contributions are added to the annuity at the end of each year and that interest on the annuity is accrued at the end of each year.

- a) [2 Points]: Clearly label a cell containing the **first year salary amount** in dollars given in the scenario.
- b) [2 Points]: Clearly label a cell containing the **annual rate of salary increase** expressed as a percentage that is given in the scenario.

- c) [2 Points]: Clearly label a cell containing the *annual contribution rate* expressed as a percentage that is given in the scenario.
- d) [2 Points]: Clearly label a cell containing the *annual rate of return on the annuity* expressed as a percentage that is given in the scenario.
- e) [2 Points]: Clearly label a cell containing the *number of years contributing* to the annuity that is given in the scenario.
- f) [10 Points]: Format the assumptions table with a consistent and appropriate number of decimal places used in all percentages. Monetary amounts must be formatted with a currency symbol and with two decimal places. The table must look neat and all values must fit within the cells.

Part 2 - Annuity Contribution Table:

The first row of some columns may be special cases. In every column, the equation entered in either the first or second row must be filled down through all of the remaining rows of the contribution table to calculate the values in those rows.



In order to receive any points for a column, the equation used in THE SECOND ROW of that column must be COPIED and PASTED without the equal, =, symbol into a clearly labeled cell (i.e. E3+\$B\$2) so that the exact letters, numbers and symbols of the equation are visible on the printed page.

- a) [5 Points]: Create a table with appropriate **headers** and with a **row for each year** a contribution is made to the annuity.
- b) [10 Points]: The table must include a column that displays the **Annual Salary** in dollars during each year of the annuity.
- c) [10 Points]: The table must include a column that displays the **Contribution Amount** made in dollars at the end of each year.
- d) [10 Points]: The table must include a column that displays the **Cumulative Contribution** in dollars *from the start of the annuity through the year corresponding to each row*.
- e) [10 Points]: The table must include a column that displays the **Interest Accrued This Period** in dollars.
- f) [10 Points]: The table must include a column that displays the **Cumulative Interest Accrued** in dollars *from the start of the annuity through the year corresponding to the each row of the table*.
- g) [10 Points]: The table must include a column that displays the **Value of the Annuity** at the *end* of each year. Hint: this includes interest compounded annually.
- h) [10 points]: The table must be **neat, clear, easy to read, well organized**, use **consistent formatting**.
- i) [5 points]: Add a **solid line border** around all four sides of **ALL cells that print on your worksheet page**. The border must be around empty cells as well as cells that contain information. This is necessary for the grader to be able to easily read to which rows and columns your equations are referring. Any cells that you choose to merge will, of course only show borders around the outside of the merged group. This is fine.