

With the exception of a dictionary (English or English/Other) this exam is closed book. The exam will require the use of a UNM Windows XP computer 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 spreadsheet, enter the letter of that column. Note: only label the columns that print on one page of the worksheet. Exactly how many columns will print depend on how wide you make your columns, the size margins you choose and the page orientation you choose.
- ✓ In each row (starting with the second row) of the **first column** of your spreadsheet, enter the number of that row.
- ✓ 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	<b><i>Your First Name and Last Name</i></b>								
3	3									
4	4									
5	5									
6	6									
7	7									


### Part 1 - Mortgage Scenario Assumptions Table:

Leilen and Travis were lucky enough to sell their first home at a modest profit. Now, they are expecting their second child and have available a 20% down payment that they will use on their \$219,000 dream home. Being CS-150 graduates, they know that the only smart loan option is a fix rate mortgage. Given their credit history, the best rate they are able to find in the current market for a 30-year, fixed rate mortgage is 7.193% APR. The closing date on the home is set for March 3<sup>rd</sup>, 2009. Monthly payments are due on the 3<sup>rd</sup> of each month starting on April 3<sup>rd</sup>, 2009. Interest is calculated by using a monthly periodic rate (not based the number of days in each month). The \$219,000 price includes all closing costs, and fees.

- a) [2 Points]: Clearly label a cell containing the **Home Cost** in dollars given in the scenario.
- b) [2 Points]: Clearly label a cell containing the **Down Payment Percentage** given in the scenario.

- c) [5 Points]: Clearly label a cell containing the **Down Payment Amount** expressed in dollars. In the same row as this cell, enter an exact copy of the equation without the =.
- d) [2 Points]: Clearly label a cell containing the **Loan Term** given in the scenario.
- e) [2 Points]: Clearly label a cell containing the **Loan APR** given in the scenario.
- f) [2 Points]: Clearly label a cell containing the **Periodic Loan Rate**. In the same row as this cell, enter an exact copy of the equation without the =.
- g) [2 Points]: Clearly label a cell containing the **Total Number of Periods** of the loan. In the same row as this cell, enter an exact copy of the equation without the =.
- h) [1 Point]: Clearly label a cell containing the **Loan Date** given in the scenario.
- i) [10 Points]: Clearly label a cell containing the **Periodic Payment Amount** of the loan. In the same row as this cell, enter the equation without the = (Hint: use PMT).
- j) [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.

## Part 2 - Mortgage Amortization Schedule:

 **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 of the first 25 payment periods**.
- b) [10 Points]: The table must include a column that displays the **date** of each payment.  
*Note: the equation used to fill down the date MUST use the EOMONTH function*
- c) [2 Points]: The table must include a column that displays the **Payment Amount** made in dollars each period (Hint: this is just a cell reference that is filled down to every row).
- d) [10 Points]: The table must include a column that displays the **Interest Accrued this Period**.
- e) [10 Points]: The table must include a column that displays the **Principal Paid this Period**. (Hint: The principal paid this period is the portion of the payment left after the interest is paid.)
- f) [10 Points]: The table must include a column that displays the **Balance** of the loan at the end of each period.
- g) [10 points]: The table must be **easy to read, well organized**, and use **consistent formatting**.
- h) [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.