**Learning Objective: Understand amortization schedule. Understand several Excel functions: Edate, Index and Match, If Error, as well as If statements.**

**Instructions for completion:**

Please use the Excel File named “Homework\_1\_Mortgage\_Template” to complete the homework.

Your job is to build an amortization schedule that will allow for extra principal payments. This “model” could be used by a borrower who wants to put some assumptions in the model and find out how many years it will take to pay off the mortgage.

Assume that the borrower is 30 years old, and the closing of the mortgage was December 31, 2020, and the first payment is due January 31, 2021.

Anything in gray needs a formula written.

Anything in blue font are “inputs” ---while building your model, these can be changed to test your model, but should be the original inputs when you turn in your file.

Formula for D4: Use PMT function to compute the monthly payment. Do not hardcode the inputs, but rather “pull” inputs D1, D2 and D3 in your formula. Round to 2 decimals.

Formula for D6: Use the Index and Match functions on Columns A and H (in the amortization schedule) to determine how many years it will take to pay off the mortgage.

Formula for D7: Years saved = Original term minus years saved

Formula for D9: Use the Index and Match functions on Columns C and H to select the date when “PAID OFF”

Formula for D12: Write a formula to determine the Age of the borrower when paid off. The Datedif function used on the current date (D8) and the date when paid off (D9) should be added to the person’s current age (D10). Also adjust for “months old” by using D11. Note: D11 has how many months the borrower is AWAY from the next birthday. It is not “months old” but can be used to determine.

**Amortization schedule portion of the file:**

Column B: Pull the closing date (in input area) and put this in every row

Column C: Use the Edate function to create the date the PMT is due. Utilize data in Columns A and B.

Column D: Use a combination of ISNUMBER, if/and statements to return what will be paid by the borrower or “Paid off”. Logic: If the PRIOR principal balance is a number AND it is also greater than the regular loan payment, then pull the regular payment. If, however, the PRIOR principal balance is a number AND greater than 0, then pull the PRIOR principal balance PLUS this month’s interest. Otherwise, the cell should return “Paid off”.

Column E: This should be an IFERROR statement which determines EITHER the dollar amount of interest paid OR “N/A” if the mortgage is paid off. Also, this amount should be rounded to 2 decimals.

Column F: Use IFERROR function to calculate the amount of principal being paid. If the mortgage is paid off, this should return “N/A”

Column G: Using a combination of if/and statements, combined with ISNUMBER, pull D5 or have the formula return “N/A.”

In addition to the ISNUMBER condition, here’s the logic:

If PRIOR principal balance is GREATER than the PRINC paid (not PMT) plus the EXTRA PAYMENT, the cell should return the EXTRA PMT.

IF (PRIOR principal balance LESS PRINC paid) >0, then take this difference; otherwise 0.

If none of this is true, “N/A”

Colum H: Use IFERROR function to return either the dollar amount of the principal balance OR “Paid Off.”

If (Prior balance – Princ Paid – Extra Prin) is greater than 0, then take this value, otherwise “Paid Off”

**Save your file with your last name on the end of the current name of the file:**

Example: My file would be named: **Homework\_EXTRA\_Mortgage\_Template\_Garner**

**Post your file back to the assignment tab!**

**END OF INSTRUCTIONS**