The PMT Function (short for *payment*) calculates periodic payments for a loan. It is a financial function that is commonly used to determine the periodic payment for a new car loan, for example.
When you are using the PMT Function, you need to know a variety of details about the loan. Add this information to your worksheet first:

- **Price of Item** (car, boat, yacht, etc.)
- **Down Payment** (in dollar amount - could be around 10%-15%, but a variety of down payment amounts are sometimes available)
- **Loan Amount** (Price of Item – Down Payment)
- **Period Length** (how often payments are made each year – the period might be daily, weekly, monthly, quarterly, semi-annually, or annually)
- **Periods Per Year**
- **Interest Rate** (expressed in rate per year, also known as APR – annual percentage rate – this is the rate of interest the lender will charge and how the lender makes a profit)
- **Rate Per Period** (APR / Periods Per Year)
- **Term** (Years in the Loan)
- **Total Periods in Life of Loan** (Nper argument)
Where can you find the PMT function?
It can be entered manually into the formula bar if you know the syntax:

It can be found in the Formulas tab, Function Library group, Financial command drop down menu:
And you can also launch the Insert Function dialog box, and search for the PMT function:
After you select the PMT Function, the Function Arguments dialog box appears. This is a very useful dialog box – it helps you remember how to properly use the function. Pay very close attention to all of the tips it provides you.

Tips appear here for the argument you have selected with the cursor.
## Arithmetic Operators & Precedence

(Page 77, Chapter 1)

<table>
<thead>
<tr>
<th>Operator/Order of Precedence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exponentiation</td>
<td>^</td>
</tr>
<tr>
<td>Division</td>
<td>/</td>
</tr>
<tr>
<td>Multiplication</td>
<td>*</td>
</tr>
<tr>
<td>Subtraction</td>
<td>-</td>
</tr>
<tr>
<td>Addition</td>
<td>+</td>
</tr>
</tbody>
</table>
Active Cell, Name Box
(Page 70, Chapter 1)
Showing Formulas

- Use the shortcut CTRL + ` (CTRL + ~) to show formulas. I will require you to print your formulas for some activities.
- Alternatively, you can use the command available in the Formulas tab, Formula Auditing group.
Showing Tracing Arrows (Page 466, Chapter 8)

- Use the tracing arrows in the Formulas tab, Formula Auditing group to see which cells are used in certain functions (trace precedents), and which cells are dependent upon a certain cell (trace dependents).
- Select Remove Arrows to clear the tracing arrows.
- These features are useful for troubleshooting problems.
Printing to a Single Page  
(Page Setup Dialog Box, Pages 52-53, 110-113)

- To print your worksheet to a single page, go to the Page Setup dialog box in the Page Layout tab, then adjust the preferences to fit to 1 page. Set the orientation appropriately for the worksheet you are printing.
Car Loan Payments:
Bob is getting a loan for a car from AutoLand. AutoLand sells cars and finances loans. He is buying a car that costs $39,750, paying $2,999 up front, and financing the rest. AutoLand has offered an interest rate of 6.75% for monthly payments over 4½ years. (The payments are at the end of each period.)

Build a new worksheet that uses the relevant function covered in class to answer the following question:
- What is the periodic payment?
What-If-Analysis (Chapter 6)

Example Word Problem:

Car Payment Question Continued:
Then, below the payment calculator (in the same worksheet) create a One-Variable Data Table (What-If-Analysis) that lists variations on the APR from 3% to 8% in increments of .5% (1/2 percent) and the subsequent periodic payment. Label the data table.

Use conditional formatting to apply a green fill color to periodic payments less than $750.
What-If Analysis (Chapter 6)

A What-If Analysis Data Table can be used to help a consumer efficiently examine a variety of options for a car loan or savings account, for example, or to help a business determine what the selling price of its products should be in order to achieve a desired profit.

Before one uses the What-If Analysis Data Table command several steps must be completed (we will cover those together in Excel). The Data Table command can be found in the Data tab, Data Tools group, What-If Analysis drop down menu.
What-If Analysis (Chapter 6)

While producing the Data Table we will use a few additional features of Excel, including Conditional Formatting (Chapter 4), and AutoFill (Chapter 1).