

FUNCTIONS

FUNCTION EXPLANATION

- ✦ Functions take a value or values, perform an operation, such as SUM or AVERAGE, and return a value or values.
- ✦ Each function begins with an equals sign.
- ✦ Arguments are included in parentheses. An example of a function is **=AVERAGE(D3:D7)**. In this function:
 - ★ AVERAGE is the function name.
 - ★ D3:D7 is the argument; the list of values that are being averaged.
- ✦ Each function must have a function name and an argument.

METHODS OF ENTERING FUNCTIONS

- ✦ A function may be entered using the keyboard or mouse, the Insert Function Dialog Box, the Insert Function button or using the options under the Formulas Tab Function Library Group.

Keyboard or Mouse

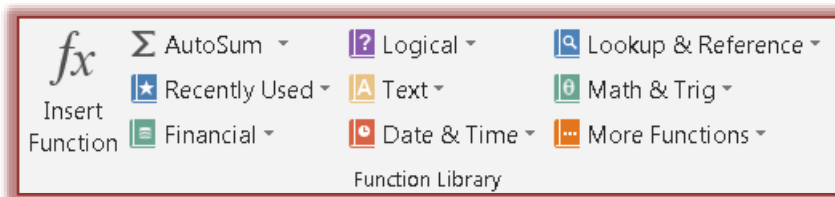
- ✦ When using this method of entering a function, you would key in the equals sign (=), input the function, and input the beginning parentheses.
- ✦ Select the cells with the mouse for which the function is being performed.
- ✦ The function will appear in the **Formula Bar** (see illustration below).



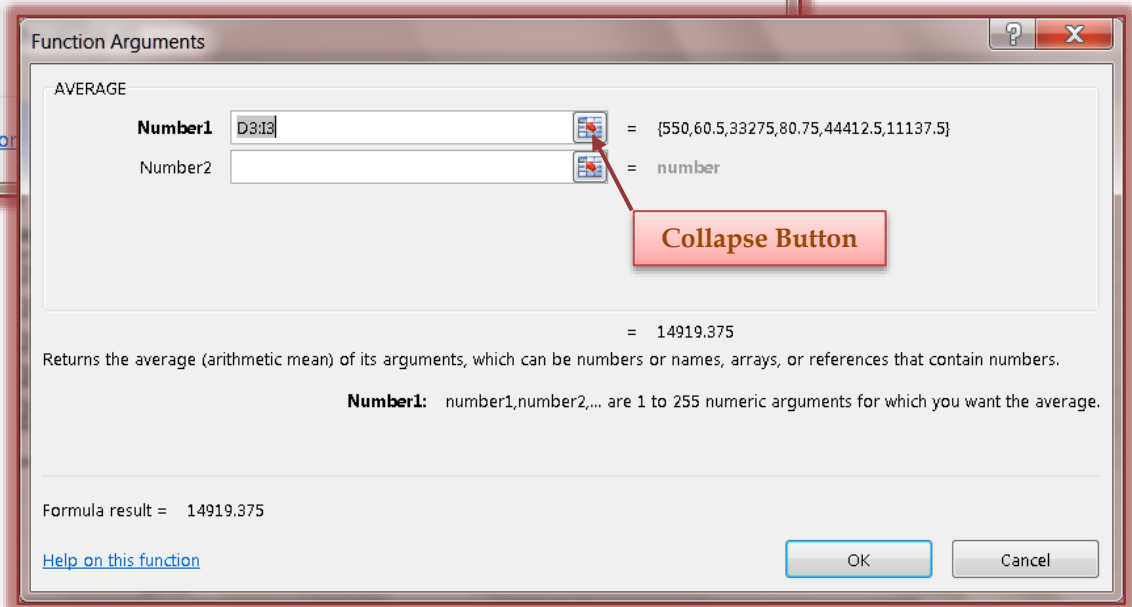
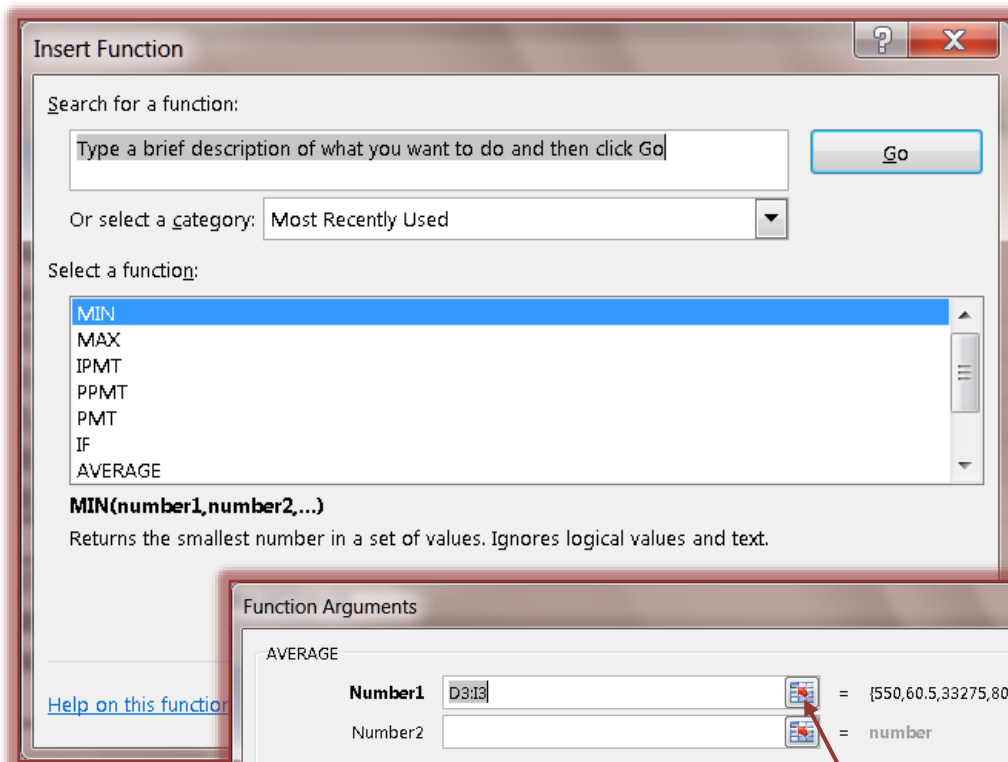
- ✦ Click the **Enter** button on the ribbon or press the **Enter** button on the keyboard.
- ✦ The results of the function will appear in the cell where the function was entered.

Insert Function Dialog Box

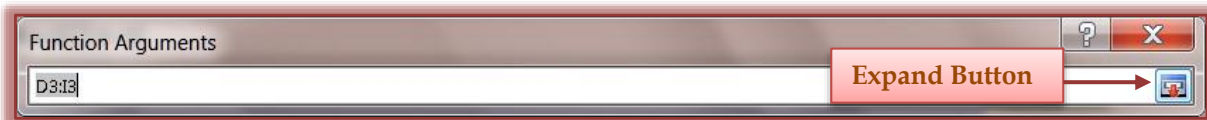
- ✦ Click the **Formulas** Tab.
- ✦ In the **Functions Library Group**, click the **Insert Function** button (see illustration below).



- ✦ The **Insert Function** dialog box will display (see illustration on next page).
- ✦ In the dialog box, select the **Category** for the function such as **Statistical**.
- ✦ Select the **type of function** that is to be used, such as **Sum** or **Average**.
- ✦ Click the **OK** button.
- ✦ The **Function Arguments** dialog box will appear (see illustration on next page).
- ✦ In the **Number 1** area do one of the following:
 - ★ Input the cells on which the calculations are to be performed.
 - ✦ The format is **D3:D9**.
 - ✦ This will perform the calculation on the cells from D3 through D9.
- ✦ Click the **Red** arrow at the end of the **Number 1** box.
- ✦ This is known as the **Collapse** button (see illustration on next page).



- ✦ The **Function Arguments** box will collapse into one line.
- ✦ With the mouse, select the cells for which the calculations are being performed.
- ✦ The information should appear in the box. An example is **E9:E11**.
- ✦ Click the **Expand** button which is the same as the **Collapse** button (see illustration below).



- ✦ Click the **OK** button to insert the function into the worksheet.

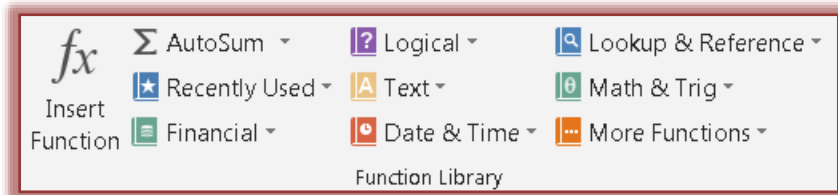
Insert Function Button

- ✦ To enter a function using this method, click the **Insert Function** button on the **Formula Bar** (see illustration on next page).
- ✦ The **Insert Function** dialog box will appear.
- ✦ Follow the same steps as described under **Insert Function Dialog Box** to enter the function.



Using the Formulas Tab Functions Group

- ✦ Click the **Formulas Tab**.
- ✦ In the **Functions Library Group**, click one of the function categories (see illustration below).



- ✦ When each of the items is clicked, a list of functions within that category will be displayed.
- ✦ An explanation of each of the formula groups is provided in the **Excel Formulas Tab** document which is available on the **Excel 2013** link in the **Training Web Site**.
- ✦ The most commonly used functions are:
 - ★ **SUM** - This function returns the total of the selected range of cells.
 - ★ **AVERAGE** - To determine the average of the selected range of cells, use this function.
 - ★ **MAX** - To determine the highest number of the selected range of cells, use this function.
 - ★ **MIN** - This function will return the lowest number in the selected range of cells.