

# Classic Graphing Activity

(Screen shots from Microsoft Excel 2007)

## Create a New Spreadsheet document

### Basic Navigation

1. Tab key moves cell pointer to the right.
2. Arrow keys move cell pointer in direction pointing.
3. Enter moves cell pointer to the cell below.
4. + Add
5. - (minus sign) Subtract
6. \* Multiply
7. / Divide



### Set up a Data Chart

Enter the text (see below) into each cell in Row 1 and Column A on your spreadsheet. Don't worry about formatting text – that's next.

	A	B	C	D	E	F
1	M&Ms Colors	Bag 1	Bag 2	Bag 3	Total	Average
2	Yellow					
3	Green					
4	Brown					
5	Blue					
6	Orange					
7	Red					
8	Total by Bag					
9						

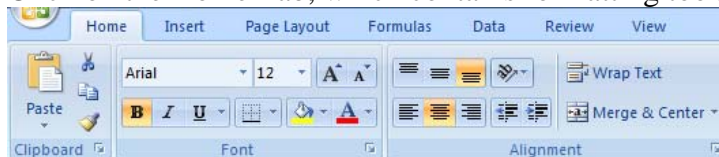
### Save the File



1. Before going any further, select Save from the Office Button .
2. Give the file a meaningful name: MMsGraph  
The program will append the correct extension (for Excel 2007 it is .xlsx)
3. Browse to the folder you created for this class and click Save.

### Format Headings

1. Select the range of cells from A1 through F1 using one of these two methods:
  - a. Click and hold the mouse in A1 and drag across to F1, *OR*
  - b. Click in A1, hold down the shift key, then click in F1. (Click + Shift + Click)
2. Click on the Home Tab, which contains formatting tools:



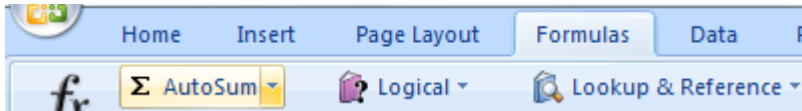
3. Set the Font size to 12 and click the Bold button.

## Enter Data

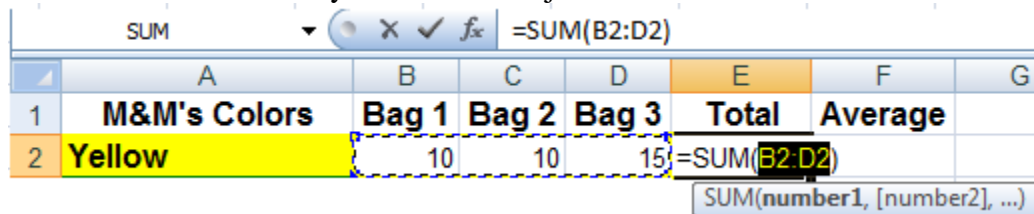
1. Open a standard size 1.69 oz. bag of M&M's plain candies (not peanut).
2. Count the number of each color and enter the number in Column B under Bag1.
3. Share your data in the online Counting M&M's forum.
4. Use the data from two other participants to complete Columns C and D (for Bag 2 and Bag 3)

## Using the Sum Function

1. Click in cell E2
2. Click on the Formulas Tab and then the AutoSum button:



3. The function automatically searches for adjacent cells with values and selects them:




4. Press Enter.

## Using a Formula

Formulas work well when cells are not adjacent, or for custom calculations.

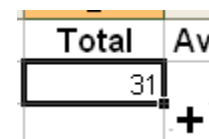
1. Click in cell E3
2. Press the equals sign (=Always begin a formula with an equals sign.)
3. Click in the first cell to be added (B3)
4. Press the + key
5. Click in the next cell to be added (C3)
6. Press the + key
7. Click in the last cell to be added (D3)
8. Press Enter

The formula bar should look like this: 

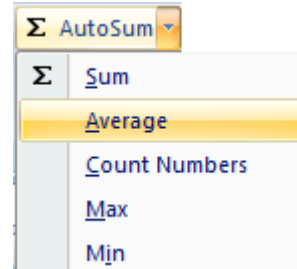
## Using Fill Down

Copy the function or formula to other cells

1. Click in Cell E2
2. Hover the cursor over the small square in the lower right corner of cell E2.
3. When the cursor changes to a thin plus sign: click, hold, and drag the mouse to cell E8.
4. Release the mouse. The formula copies into each cell and adjusts the calculation to correspond to the correct Row.
5. Save.



## Using the Average Function



1. Click in cell F2.
2. Click on the arrow to the right of the AutoSum button on the Formulas Toolbar.
3. Select Average from the drop down list.  
All the cells with numeric values to the left of F2 are automatically selected.

Bag 1	Bag 2	Bag 3	Total	Average
10	10	15	35	=AVERAGE(B2:E2)

4. Since we don't want to include the Total column (E2) in the average, highlight E2 in the formula and change it to D2:

Bag 1	Bag 2	Bag 3	Total	Average
10	10	15	35	=AVERAGE(B2:D2)

5. Press Enter.

## Using a Formula

Once again, formulas work well when cells are not adjacent, or to create custom calculations. The formula for average looks like this:

3	Green	15	15	9	39	=(B3+C3+D3)/3
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The AVERAGE formula is similar to the SUM formula except that the three cell values are enclosed by parentheses and then divided by 3.

*See Interactive Guide 1-2, Spreadsheet Vocabulary, for more information about Math Operators (+ - \* /) and Order of Operations.*

## Using Fill Down

Copy the Average formula from F2 through F8.

1. Click in cell F2.
2. Place the cursor on the small square in the lower right corner of cell F2. A thin + should appear.
3. Click and hold on the corner + and drag the mouse to cell F8. Release.

## Additional Formula in Row 8

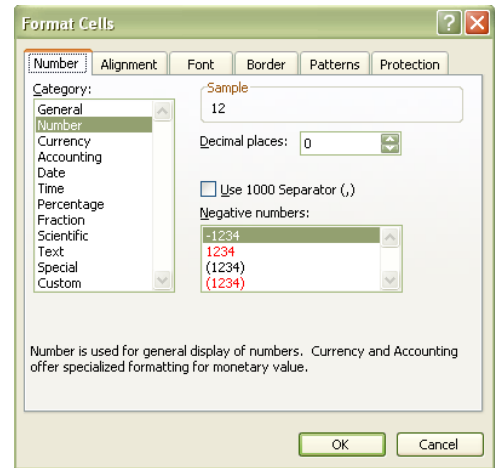
1. Total number of M&Ms in each bag:
2. Click in cell B8.
3. Enter an = sign.
4. Use either the AutoSum Function or create a formula for the total number of M&Ms in each bag (Cell Range is B2:B7). Press Enter.
5. Click in cell B8 and use the Fill Across option (same as Fill Down, except that you drag the handle to the right) to copy the formula to Columns C, D and E.
6. Save.

## Format Cells

There are many options for formatting the contents of a cell or range of cells. Formatting tools are now located on the Home Tab in Excel 2007.

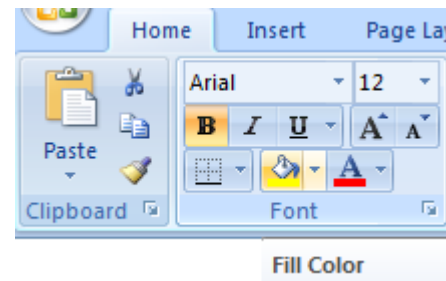
### Number

1. Highlight the range F2:F8 in the Average column.
2. Click the Home Tab, select Format from the Cells pane. Then select Format cells at the bottom of the drop down menu.  
\*It is easier to right-click on the highlighted cells and select Format Cells from the drop down menu.
3. Then click the Number category.
4. Set the number of decimals to 0. Click OK.



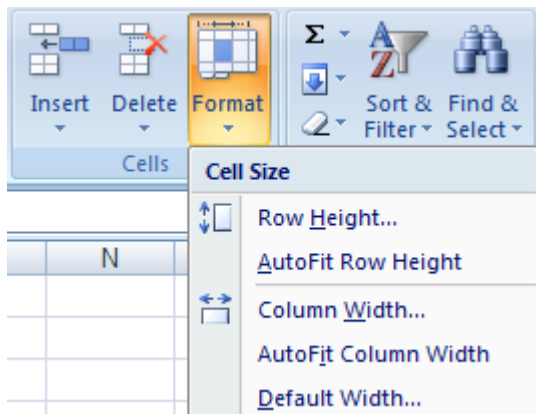
### Cell Shading

1. Click on cell A2 which contains the text “Yellow.”
2. On the Home Tab, locate the paint bucket icon (Fill Color) and select a yellow color.
3. Click on each of the cells in Column A and fill each one with the corresponding color.
4. Another method is to right-click on the selected cell and bring up the Format Cells window. Click on the Fill tab.



### Column Width

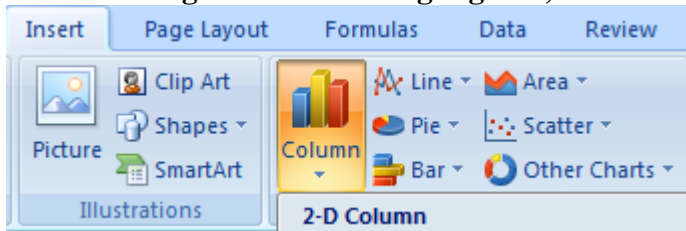
1. Select the range of cells from A1 through F1.
2. On the Home Tab, in the Cells pane, click on Format and choose AutoFit Column Width. This resizes each column to accommodate the longest word.



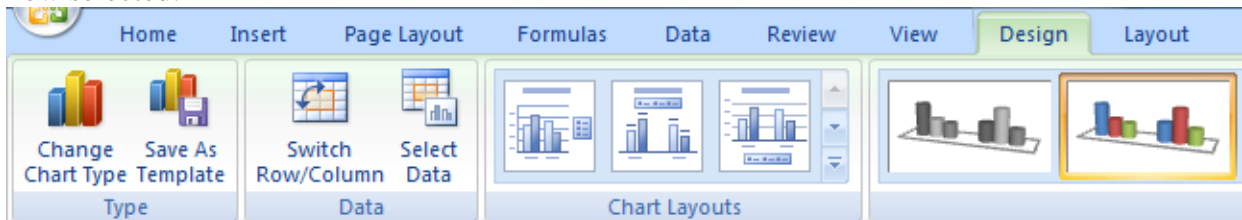
## Making a Chart

Charts are visual presentations of data from a worksheet. Use the Chart Wizard button on the Standard Toolbar for help in creating and modifying charts. A series of Chart Wizard dialog boxes will guide you through the process. The data range is the area of the worksheet that you want to chart. It includes any numeric data that you want to chart and can include the titles for the data.

1. Select the range of cells that contain the data you want to include in the graph using one of these methods:
  - a. Highlight the cells by dragging the mouse across them, or
  - b. Use the click – shift – click method: Click in the first cell (A1), hold down the shift key, and click in the last cell (D7) to highlight the range of cells that contain data.
2. **With the range of data cells highlighted**, click the Insert Tab.



3. Click on the Column icon and select a column style that would be appropriate for the data.
4. The Chart appears on the spreadsheet. With the Chart selected, notice that the Design Tab is now selected:



5. In the Chart Layouts pane, select a layout that includes a title and legend (Layout 1 is just fine for this activity).
6. Highlight the placeholder words Chart Title and enter a meaningful title for the chart (for example, M&M's Color Chart).
7. Click on the chart border to resize, or click inside to move it on the page. The graph may also be copied and pasted into another document (like a word processing page).

For more information about M&M's check out the official website: <http://gcv.mms.com>

To make your own M&M like the graphic on the first page, go to:  
<http://www.becomeanmm.com/>