



Relative & Absolute Cell References *B3 vrs \$B\$3*

By default, all **cell references** are **relative references**. When copied across multiple **cells**, they change based on the **relative** position of rows and columns.

For example, if you copy the formula =A1+B1 from row 1 to row 2, the formula will become =A2+B2.

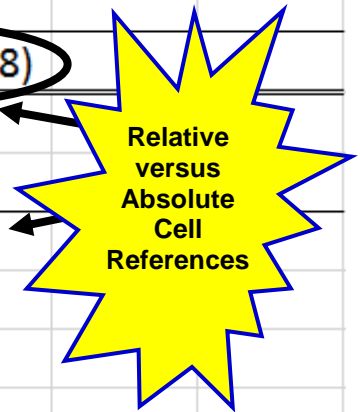
This is a handy trick when working with data. Sometimes, it is helpful to have MS Excel identify cell addresses and change them when we copy, paste and/or fill. Other times, we need to complete a mathematical operation that always uses the same number even when we copy, paste, and/or fill.

In today's spreadsheet, we will analyze the colors of M&M candies in a small bag. Please carefully create the spreadsheet you see on the right entering the formulas/functions exactly as shown.

When you use a cell reference with a letter and number (i.e B3), when that address is used in a formula or function and is copied or filled, MS Excel adjusts the cell address – this is a **RELATIVE** cell address.

Using dollar signs ((i.e. B3/\$b\$9) is an **ABSOLUTE CELL ADDRESS** and it will not change when it is filled or copied.

	A	B	C	D
1	M & Ms Analysis			
2	Color of M & M	Bag #1	Bag #2	Bag #3
3	Blue	4		
4	Orange	5		
5	Green	3		
6	Yellow	2		
7	Red	4		
8	Brown	1		
9	Totals	=SUM(B3:B8)		
10				
11	Percent of Each Bag			
12	Blue	=B3,\$B\$9		
13	Orange	Fill Down		
14	Green	Fill Down		
15	Yellow	Fill Down		
16	Red	Fill Down		
17	Brown	Fill Down		
18	Total	AutoSum		
19				



When you have completed the data entry and analysis of your bag of M&Ms, then please check with 2 classmates and get the data for 2 other bags of M&Ms to add to your spreadsheets.