

## Understanding Absolute and Relative Cell References

A cell reference identifies a cell or cell range and tells Excel which values to use in a formula. There are two types of cell references.

- **Relative:** Relative references (like A1) tell Excel how to find another cell starting from the cell that contains the formula. Using a relative reference is like giving someone directions that explain where to go from where they are currently standing. When a formula containing relative references is moved, it will reference new cells based on their location to the formula.

For example, if cell A2 contained the formula =A1, and you copied and pasted the formula to cell B2, the formula in B2 would read =B1 because the reference is relative to the location of the formula.

- **Absolute:** Absolute references (like \$A\$1) always refer to the same cell address, even if the formula is moved.

For example, if cell A2 contained the formula =\$A\$1, and you copied and pasted the formula to cell B2, the formula in B2 would still read =\$A\$1.

### Create a relative cell reference in a formula

Relative cell addresses are usually the desired way to reference other cells in formulas, which is why they are the default method used by Excel to reference cells.

1. Click the cell you want to reference, for example click cell B4.
  - **Other Ways to Create a Relative Cell Reference in a Formula:**  
Type the address of the cell, for example type B4.

### Create an absolute cell reference in a formula

If you want a cell reference to always refer to a particular cell address, you need to use an absolute cell reference.

1. Press and hold the <F4> key as you click the cell you want to reference.
  - Dollar signs \$ are added to the cell reference.
  - **Other Ways to Add an Absolute Cell Reference in a Formula:**  
Type the address of the cell with \$ (dollar signs) before every reference heading. (For example, type \$B\$4).

#### Exercise Notes

- **Exercise File:** Sales 2-6.xlsx.
- **Exercise:** Enter the formula =F7\*\$G\$2 in cell G7. Copy cell G7 to cells G8:G10. Copy cell F11 over to cell G11.

	E	F	G	H
1			Budget Increase	
2			110%	
3	Apr	May	June (Budgeted)	
4	16500	15500	17050	
5				
6				
7	3500	3500	=F7*\$G\$2	
8	800	800		
9	7000	7000		
10	4000	4000		
11	15300	15300		
12				

Figure 2-14: A formula with a relative (F7) and an absolute (\$G\$2) cell reference.

Here the formula from the previous figure has been filled down. The F7 reference has changed to F8 because it was relative, while \$G\$2 stayed the same because it was absolute.

	D	E	F	G	H
1				Budget Increase	
2				110%	
3	Mar	Apr	May	June (Budgeted)	
4	18500	16500	15500	17050	
5					
6					
7	3000	3500	3500	3850	
8	700	800	800	880	
9	7000	7000	7000	7700	
10	3000	4000	4000	4400	
11	13700	15300	15300	16830	
12					

Figure 2-15: Relative vs. absolute cell references.