Cell References

This guide will cover the following:

1. **Definition of Cell References**

2. **Syntax of Cell References**

3. **Relative, Absolute, Mixed Cell References**

In this topic, we will learn what, why and how to use cell references.

Definition of Cell References

- A **cell reference** is a cell or a cell range, which identifies its location on a worksheet.
- Cell references can be used as arguments in a formula/function.
- As such, if the values of our referenced cells change, our result values (calculated by formulas) will auto-update without having to editing the formulas.

Syntax of Cell References

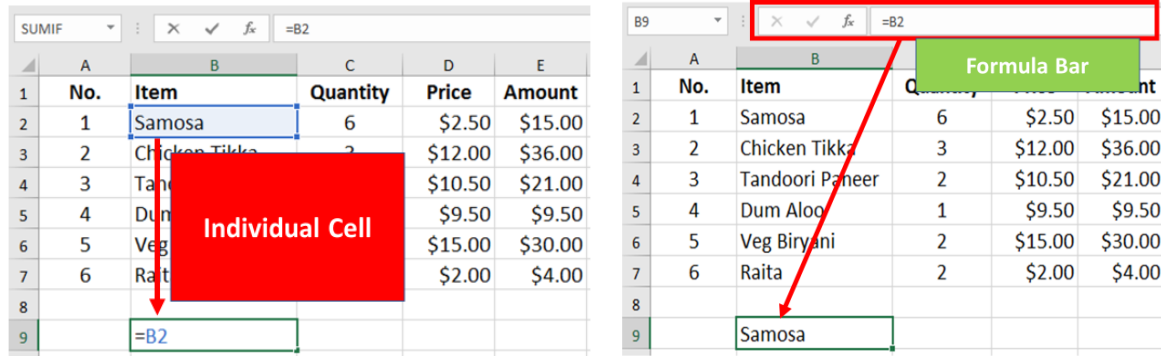A cell's location can be identified by its column and row reference.

There are several types of cell references and associated sytanxes.

Description	Syntax
Cell in Column B and Row 2	B2
A cell range with the most top-left cell (starting cell) as cell C2 and the most bottom-right cell (ending cell) as cell C7.	C2:C7
All the cells in Row 6	6:6
All the cells in Row 1 to Row 10	1:10
All cells in Column B	B:B
All cells in Column A to Column D	A:D
Cell A1 in the worksheet named "Sheet1"	Sheet1!A1

The screenshot on the left shows the syntax of the cell reference and the right shows its result:

1. **Individual Cell**

   For an individual cell, its syntax is the column reference followed by the row reference. In this example, the cell reference is *B2* for the cell in Row *B* and Column *2*.

   After you have entered in the cell, say *cell B9*, you can click on the cell and look at the formula bar to view its syntax. Alternatively, double-click on the cell (or press F2) to view its syntax directly in the cell itself.
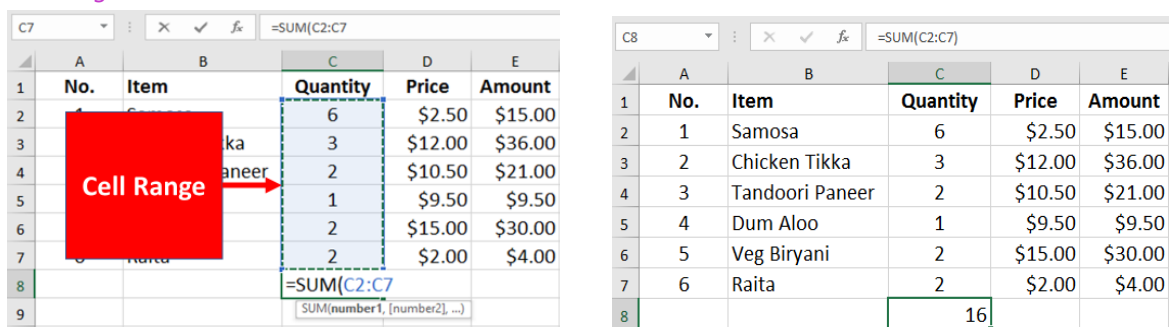
   When you want to use cell reference by itself, not as an argument in a formula/function, be sure to insert the equal (=) sign first. This allows Excel to recognize that a cell is equal to another cell.

2. **Cell Range**

   For a cell reference for a cell range, use *{starting cell reference}:{ending cell reference}* .

   In this example, the starting cell reference is *C2* and the ending cell reference is *C7*. Hence, it is the *cell range C2:C7*.

3. **Row Reference**

If you type in *cell B8* the row reference *6:6*, it will return the cell value in Column *B* and Row *6*.

4. **Column Reference**

If you type in *cell F3* the column reference *B:B*, it will return the cell value in Column *B* and Row *3*.

Relative, Mixed & Absolute Cell References

To switch between relative, mixed and absolute cell references, highlight the cell reference and press F4 on your keyboard.

Description	Explanation	Syntax
Relative	Both column and row are not fixed when copied into other cells.	A1
Mixed	Either the column or the row is fixed, but not both, when copied into other cells. If there is a $ before its reference, it is fixed.	$A1, A$1
Absolute	Both column and row are fixed when copied into other cells.	A1