

Lesson 16 Relative Referencing -Copying and Pasting Formulas

Remember from the last lesson we learnt how to do Basic Formulas. With that in mind, turn back to the worksheet and let us look at another function to start completing our calculations

Once a formula is *typed* into a worksheet, it can be **copied** and **pasted** to other *cell locations*.

e.g In **D3**, we calculated the *annual spend* for **Utilities** category. But this calculation needs to be performed for the rest of the *cell location* in **Column D**. Since we used **B3** *cell reference* in the formula, **Excel** automatically adjusts that *cell reference* when the *formula* is *copied* and *pasted* into the rest of the *cell locations* in the *columns*. This is called **Relative Referencing** and it is done as the following steps instructs us:

1. Click cell **D3**.
2. Place the *mouse pointer* over the **Auto Fill Handle** in the *bottom right corner* of the cell.
3. When the *mouse pointer* turns from a *white block plus sign* to a *black plus sign*, click and *drag down* to **D11**. This pastes the formula into the range **D4:D11**.
4. *Double click* cell **D6**. Notice that the *cell reference* in the formula is automatically changed to **B6**.
5. Press **ENTER** key.¹

	A	B	C	D	E
1	Regular Expenses				
2	Expense	Monthly Spend	Percent of Total	Annual Spend	Last Year Spend
3	Utilities	\$ 250		\$ 3,000	\$ 3,000
4	Cell Phone	\$ 100		\$ 1,200	\$ 1,200
5	Food	\$ 300		\$ 3,600	\$ 2,250
6	Gas	\$ 125		=B6*12	\$ 1,200
7	Clothes	\$ 100		\$ 1,200	\$ 1,000
8	Insurance	\$ 125		\$ 1,500	1,500
9	Entertainment	\$ 200		\$ 2,250	2,250
10	Vacation	\$ 100		\$ 2,000	2,000
11	Miscellaneous	\$ 125		\$ 1,500	\$ 1,550

The picture above shows the results added to the rest of the cell location in the Annual Spend column.

For each row, the formula takes the value in the **Monthly Spend** column and *multiplies* it by **12**. You will also see that cell **D6** has been *double clicked* to show the *formula*. Notice that **Excel** automatically changed the original *cell reference* of **B3** to **B6**. This is the result of **relative referencing**, which means **Excel** automatically adjusts a cell reference relative to its original location when it is pasted into new cell locations. The formula was pasted into eight cell locations below, the original cell location. As a result, **Excel** increased the *row number* of the original *cell reference* by a value of one for each row it pasted into.

Relative Referencing

Relative Referencing is a convenient feature in Excel. When you use cell references in a formula, Excel automatically adjusts the cell references when the formula is pasted into new cell locations. If this feature were not available, you would have to manually retype the formula when you want the same calculation applied to other cell locations in a column or row.

Questions

1. What does relative referencing mean?
2. Describe the steps to take to do relative referencing?