Creating Simple Formulas

Excel can be used to calculate numerical information. In this lesson, you will learn how to **create simple formulas** in Excel to add, subtract, multiply, and divide values in a workbook. You'll also learn the various ways you can use **cell references** to make working with formulas easier and more efficient.

Simple formulas

A **formula** is an equation that performs a calculation. Like a calculator, Excel can execute formulas that add, subtract, multiply, and divide.

One of Excel's most useful features is its ability to calculate using a cell address to represent the value in a cell. This is called using a cell reference.

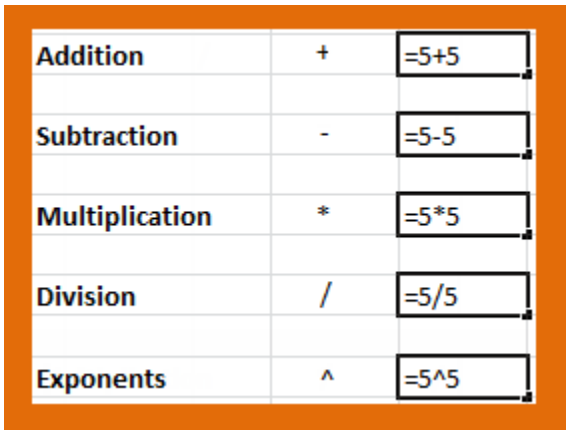
To maximize the capabilities of Excel, it is important to understand how to **create simple formulas** and **use cell references**.

You can download Excel2010_SimpleForm_Practice file from moodle for extra practice.

Creating simple formulas

Excel uses standard operators for equations, such as a **plus sign** for addition (+), **minus sign** for subtraction (-), **asterisk** for multiplication (*), **forward slash** for division (/), and **caret** (^) for exponents.

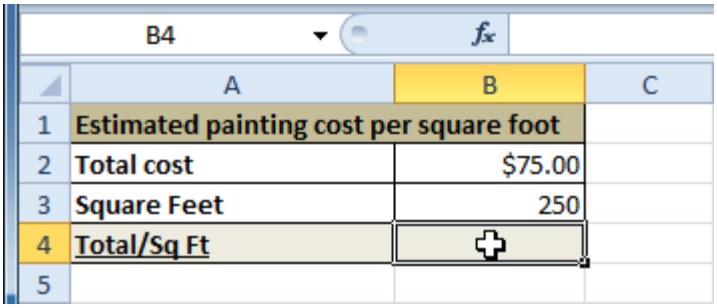
The key thing to remember when writing formulas for Excel is that all formulas must begin with an **equals sign** (=). This is because the cell contains—or is equal to—the formula and its value.



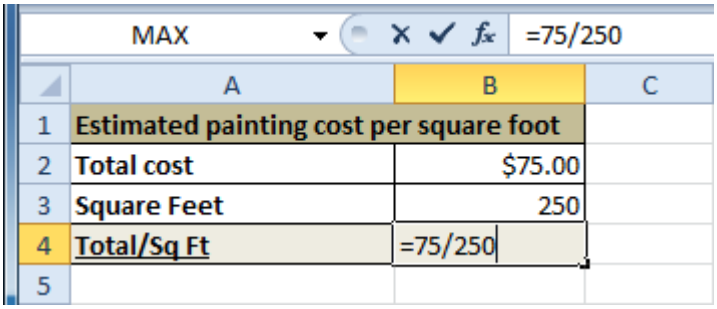
Addition	+	=5+5
Subtraction	-	=5-5
Multiplication	*	=5*5
Division	/	=5/5
Exponents	^	=5^5

To create a simple formula in Excel:

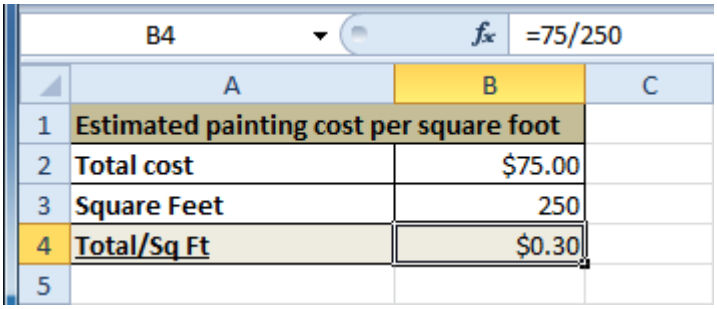
1. Select the cell where the answer will appear **(B4,** for example).



2. Type the **equals sign (=)**.
3. Type in the formula you want Excel to calculate (**75/250**, for example).



4. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.



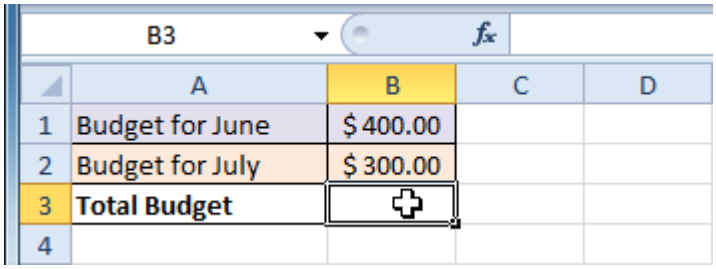
If the result of a formula is too large to be displayed in a cell, it may appear as **pound signs** (#######) instead of a value. This means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

Creating formulas with cell references

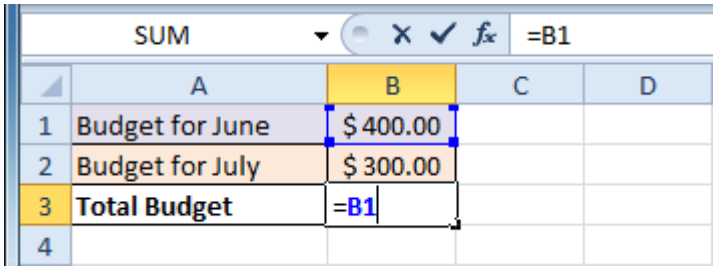
When a formula contains a cell address, it is called a **cell reference**. Creating a formula with cell references is useful because you can update data in your worksheet without having to rewrite the values in the formula.

To create a formula using cell references:

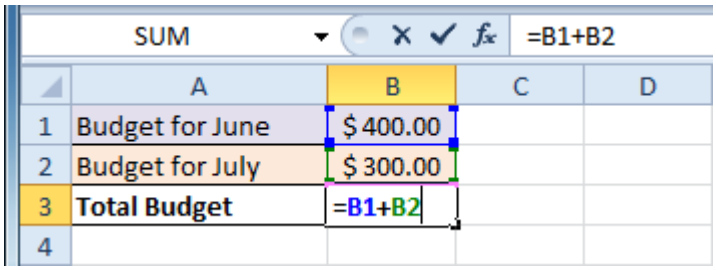
1. Select the cell where the answer will appear (**B3,** for example).



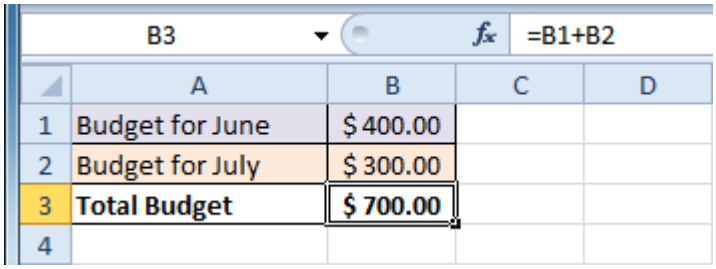
2. Type the **equals sign (=)**.
3. Type the cell address that contains the first number in the equation (**B1,** for example).



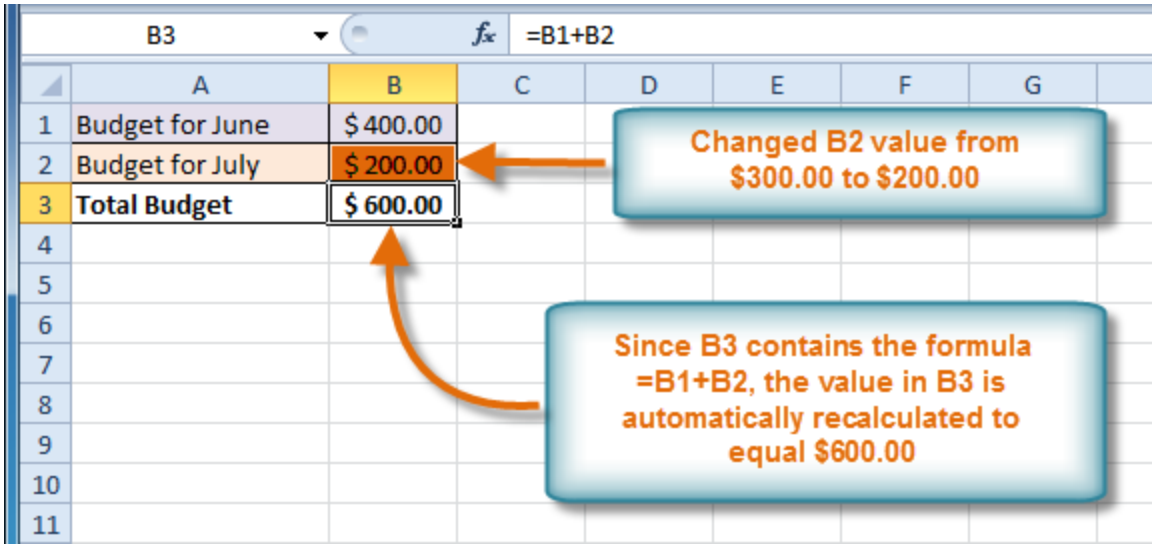
4. Type the operator you need for your formula. For example, type the **addition sign (+)**.
5. Type the cell address that contains the second number in the equation (**B2,** for example).



6. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.



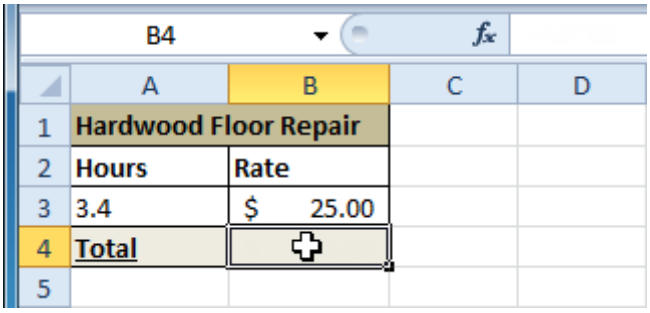
If you change a value in either B1 or B2, the total will automatically recalculate.



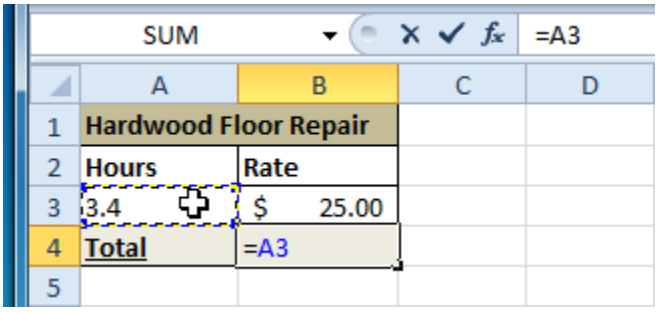
Excel **will not always tell you** if your formula contains an error, so it's up to you to check all of your formulas.

To create a formula using the point-and-click method:

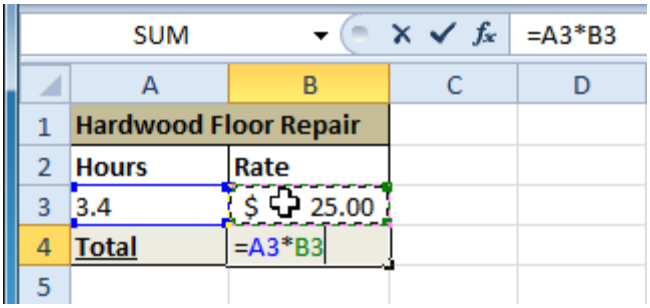
1. Select the cell where the answer will appear (**B4,** for example).



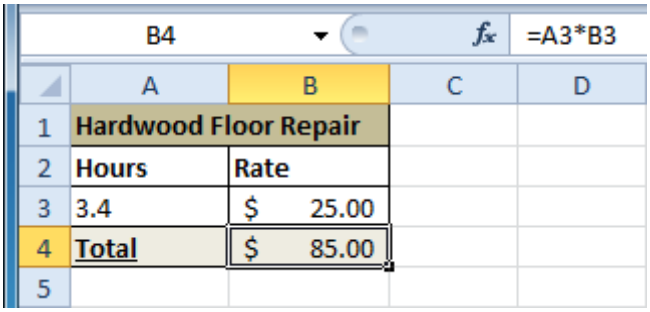
2. Type the **equals sign (=)**.
3. Click the **first cell** to be included in the formula (**A3,** for example).



4. Type the operator you need for the formula. For example, type the **multiplication sign (*)**.
5. Click the **next cell** in the formula (**B3,** for example).

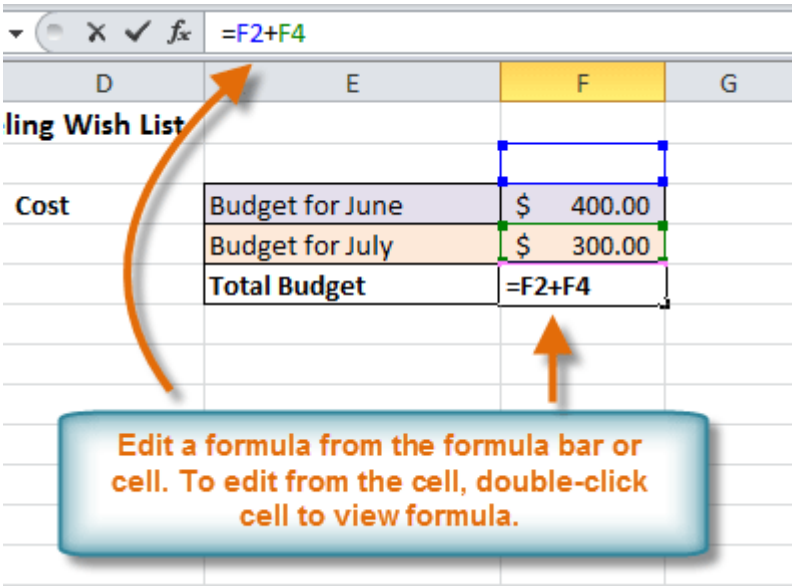


6. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.

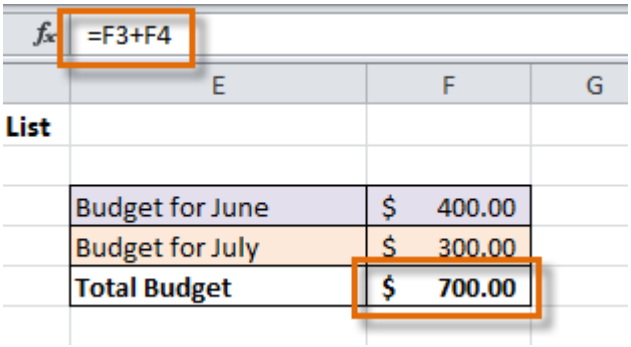


To edit a formula:

1. Click the cell you want to edit.
2. Insert the cursor in the **formula bar**, and edit the formula as desired. You can also **double-click the cell to view and edit the formula directly** from the cell.
3. When you're done, press **Enter** or select the **Enter** command ✓.



4. The new value will be displayed in the cell.



If you change your mind, use the **Cancel** command ✕ in the formula bar to avoid accidentally making changes to your formula.

Challenge!

1. Open an **existing Excel 2010 workbook**. If you want, you can use Excel2010_SimpleForm_Practice file from moodle.
2. Write a simple **division formula**. If you are using the example, write the formula in cell **B18** to calculate the painting cost per square foot.
3. Write a simple **addition formula** using cell references. If you are using the example, write the formula in cell **F5** to calculate the total budget.
4. Write a simple **subtraction formula** using the point-and-click method. If you are using the example, subtract the **Expand Bathroom** cost (C6) from the **Total** cost (C11). Calculate your answer in C12.
5. Edit a formula using the **formula bar**.