

Adding Numbers in Excel

To add two or more numbers in Excel you need to create a formula. Two important points to remember about Excel formulas:

- formulas in Excel always begin with the equal sign (=)
- the equal sign always goes in the cell where you want the answer to go

Use Cell References in Formulas

Even though you can use numbers directly in a formula, it is much better to use the references or addresses of the cells containing the numbers you want to add. If you use the cell references rather than the actual data, later, if you need to change the data in either cell, the results of the formula will update automatically without you having to rewrite the formula.

Setting Up the Addition Formula

As an example, let's create a formula in cell C1 that will add the contents of cell B1 from cell A1.

Our formula:

=A1 + B1

Our data:

- place the number 20 in cell A1
- place the number 10 in cell B1

Formula Steps To add 10 to 20 and have the answer appear in cell C1:

1. Type an equal sign in cell C1.
2. Click on cell A1 with the mouse pointer.
3. Type the plus sign (+) in cell C1.
4. Click on cell B1 with the mouse pointer.
5. Press the ENTER key on the keyboard.
6. The answer 30 should be present in cell C1.
7. Even though you see the answer in cell C1, if you click on that cell you will see the formula in the formula bar above the work area. To expand your formula to include additional operations - such as subtraction, multiplication, or more additions- just continue to add the correct mathematical operator followed by the cell reference containing your data.

Note: Before you mix different mathematical operations, be sure you understand the order of operations that Excel follows when evaluating a formula.

Formula Bar

Definition: The formula bar in Excel is located above the work area of the spreadsheet. The formula bar displays the data or formula stored in the active cell. The formula bar can be used to enter or edit a formula, a function, or data in a cell.

Examples: The active cell displayed the answer to the formula. The actual formula for the active cell was displayed in the formula bar.

formula bar displays actual formula

	B	C
Cost of car		20000
Tax rate		0.07
Total Taxes		1400

active cell displays answer to formula

Subtracting Numbers in Excel

To subtract two or more numbers in Excel you need to create a formula. Two important points to remember about Excel formulas:

- formulas in Excel always begin with the equal sign (=)
- the equal sign always goes in the cell where you want the answer to go

Use Cell References in Formulas

Even though you can use numbers directly in a formula, it is much better to use the references or addresses of the cells containing the numbers you want to subtract. If you use the cell references rather than the actual data, later, if you need to change the data in either cell, the results of the formula will update automatically without you having to rewrite the formula.

Setting Up the Subtraction Formula

As an example, let's create a formula in cell C1 that will subtract the contents of cell B1 from cell A1.

Our formula:

=A1 - B1

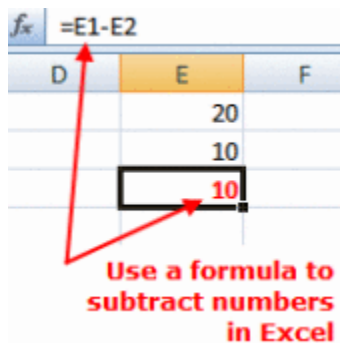
Our data:

- add the number 20 in cell A1
- add the number 10 in cell B1

Formula Steps

To subtract 10 from 20 and have the answer appear in cell C1:

1. Type an equal sign in cell C1.
2. Click on cell A1 with the mouse pointer.
3. Type a minus sign (-) in cell C1.
4. Click on cell B1 with the mouse pointer.
5. Press the ENTER key on the keyboard.
6. The answer 10 should be present in cell C1.
7. Even though you see the answer in cell C1, if you click on that cell you will see our formula in the formula bar above the work area.



Multiplying Numbers in Excel

To multiply two or more numbers in Excel you need to create a formula. Important points to remember about Excel formulas:

- formulas in Excel always begin with the equal sign (=)
- the equal sign always goes in the cell where you want the answer to go
- the multiplication sign in Excel is the asterisk (*)

Use Cell References in Formulas

Even though you can use numbers directly in a formula, it is much better to use the references or addresses of the cells containing the numbers you want to add. If you use the cell references rather than the actual data, later, if you need to change the data in either cell, the results of the formula will update automatically without you having to rewrite the formula.

Setting Up the Multiplication Formula

As an example, let's create a formula in cell C1 that will multiply the contents of cell B1 from cell A1.

Our formula: =A1 * B1

Our data:

- place the number 20 in cell A1
- place the number 10 in cell B1

Formula Steps

To multiply 10 to 20 and have the answer appear in cell C1:

1. Type an equal sign in cell C1.
2. Click on cell A1 with the mouse pointer.
3. Type an asterisk sign (*) in cell C1.
4. Click on cell B1 with the mouse pointer.
5. Press the **ENTER** key on the keyboard.
6. The answer 200 should be present in cell C1.
7. Even though you see the answer in cell C1, if you click on that cell you will see our formula in the formula bar above the work area

Excel Division

To divide two numbers in Excel you need to create a formula. Important points to remember about Excel formulas:

- formulas in Excel always begin with the equal sign (=)
- the equal sign always goes in the cell where you want the answer to go
- the division symbol is the forward slash (/)

Use Cell References in Formulas

Even though you can use numbers directly in your division formula, it is much better to use the references or addresses of the cells containing your data. If you use the cell references rather than the actual data, later, if you need to change the data in either cell, the results of the formula will update automatically without you having to rewrite the formula.

Setting Up the Division Formula

As an example, let's create a formula in cell E1 that will divide the contents of cell C1 by cell D1.

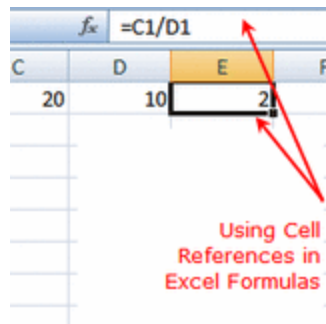
Our formula: =C1 / D1

Our data: (1) place the number 20 in cell C1 (2.) Place the number 10 in cell D1

Division Formula Steps

To divide 20 by 10 and have the answer appear in cell E1:

1. Type an equal sign in cell E1.
2. Click on cell C1 with the mouse pointer.
3. Type the division sign (/) in cell E1.
4. Click on cell D1 with the mouse pointer.
5. Press the **ENTER** key on the keyboard.
6. The answer 2 should be present in cell E1.
7. Even though you see the answer in cell E1, if you click on that cell you will see our formula in the formula bar above the work area



Calculate percentages

Let's say you want to calculate a sales tax for different states, compute a grade for a test score, or determine a percent change in sales between two fiscal quarters. There are several ways to calculate percentages.

Percentages are calculated by using the following equation:

$$\text{amount}/\text{total} = \text{percentage}$$

Where percentage is in decimal format.

To quickly display the result as a percentage, Click **Percent Style**  on the **Formatting** toolbar.

The most frequently used operators in formulas or functions

With Excel you can have several operators in a function to deal with data. Operators are symbols that Excel identifies with arithmetic operations and the link between two arguments.
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In the chart below we can see the operators most frequently used.

OPERATOR SYMBOL	OPERATION PERFORMED
+	SUM
-	SUBTRACTION
*	MULTIPLICATION
/	DIVISION
^	EXPONENTIATION
&	UNION/CONCATENATION
=	Comparison EQUAL TO
>	Comparison GREATER THAN
<	Comparison LESS THAN
>=	Comparison GREATER THAN/EQUAL TO
<=	Comparison LESS THAN/EQUAL TO
<>	Comparison DIFFERENT

In a formula or function you can use as many operators as you need, bearing always in mind that operators always refer to arguments. You can create really complex formulas. Let's see an example.

= ((SUM(A1:A7)*SUM(B1:B7)) / (SUM(C1:C7)*SUM(D1:D7)))-(F8*SUM(G1:G5))

Operators priority

We have seen that a formula can be very complex, using many operators. Excel, as any other mathematical operator, has certain rules to establish what operations to do first so the result is the correct one.

In the following chart we are showing priorities established by Excel.

OPERATOR SYMBOL	OPERATION PERFORMED	PRIORITY
^	EXPONENTIATION	1
*	MULTIPLICATION	2
/	DIVISION	2
+	SUM	3
-	SUBTRACTION	3
&	UNION/CONCATENATION	4
=	Comparison EQUAL TO	5
>	Comparison GREATER THAN	5
<	Comparison LESS THAN	5
>=	Comparison GREATER THAN/EQUAL TO	5
<=	Comparison LESS THAN/EQUAL TO	5
<>	Comparison DIFFERENT	5

Apart from this priorities chart, the top priority, that is the operation calculated first, is that one in brackets.

Let's see how would Excel resolve the formula we saw as an example:

We know there are 10 operations:

- 5 SUMS
- 3 MULTIPLICATIONS
- 1 DIVISION
- 1 COMPARISON

Excel will resolve first each of **SUM** operation separate, and then it will do the **MULTIPLICATION** operations; next it will do the **DIVISION** operation, and finally the **COMPARISON**.