

# Excel - Introduction to Formulas

## “What are Excel formulas, and how do I use them?”

You can use Excel **formulas** to perform calculations, from basic maths (e.g. addition) to statistics (e.g. standard deviation).



Type your formula in the cell where you would like the result to appear.  
All Excel formulas start with an equals sign (=).

### Mathematical Operators

The common operators used in Excel are conveniently located in the number pad area of your keyboard.



Add	+
Subtract	-
Divide	/
Multiply	*

### Order of Operations

If you use more than one operator in a formula, Excel will calculate the result using the order of operations known as **BODMAS**:



<b>B</b> rackets	( )
<b>O</b> f	^
<b>D</b> ivision	/
<b>M</b> ultiplication	*
<b>A</b> ddition	+
<b>S</b> ubtraction	-

You can change the order of operations using brackets. Any part of a formula that is contained in brackets will be calculated first. For example, using BODMAS,  $=3+2/2$  would equal **4**. By using brackets  $=(3+2)/2$  would equal **2.5**.

## Write an Excel formula

1. Click in the cell where you would like the result of your formula to appear e.g. **A1**

	A	B	C
1			
2			
3			
4			

2. Type your formula, starting with the equals sign e.g. **=3+2/2**

	A	B	C
1	=3+2/2		
2			
3			
4			

3. EITHER press the **Enter** key to display the result in **A1** and move to the cell below

	A	B	C
1	4		
2			
3			

- OR click the tick in the **Formula Bar** to display the result in **A1** and stay in **A1**



Double-click on a formula to edit it.

You can also edit the formula in the **Formula Bar**, but you must first click on the cell e.g. **A1**.

You can press the **Esc** key whilst editing a formula to cancel the changes.

## Edit an Excel formula

1. Double-click on the cell containing your formula e.g. **A1**

	A	B	C
1	4		
2			
3			
4			

2. Your cursor will flash at the insertion point at the end of the formula

	A	B	C
1	=3+2/2		
2			
3			
4			

3. Type the change to your formula e.g. **=(3+2)/2**
4. Press **Enter** or click the tick on the **Formula Bar** to display the new result

	A	B	C
1	=(3+2)/2		
2			
3			
4			

	A	B	C
1	2.5		
2			
3			
4			

## Write an Excel formula using cell references

You can improve your formulas by storing data in other cells, and using **cell references** in your formula. This means your formula results will update automatically if you change the original data. For the next example, we will type some data in column **C** so that we can reference the cells in our formula.

1. Type the following data into column **C**:  
3 (**C1**), 5 (**C2**) and 2 (**C3**)

	A	B	C
1	2.5		3
2			5
3			2
4			

2. Click on the cell where you would like the result of your formula to appear e.g. **A2**

	A	B	C
1	2.5		3
2			5
3			2
4			

3. Type the equals sign, then click on the first cell you would like to reference e.g. **C1**

	A	B	C
1	2.5		3
2	=C1		5
3			2
4			

4. Complete your formula, using operators and clicking on cell references e.g. **=C1\*C3-C2**

	A	B	C
1	2.5		3
2	=C1*C3-C2		5
3			2
4			



Notice the helpful colour coding between the cell references in your formula, and their corresponding cell borders.

## Further information and help

Use MyIT to log calls with the IT Service Desk: <https://myit.abdn.ac.uk>