

A formula is an instruction to perform a mathematical calculation. ($A+B=C$)

Example of a formula

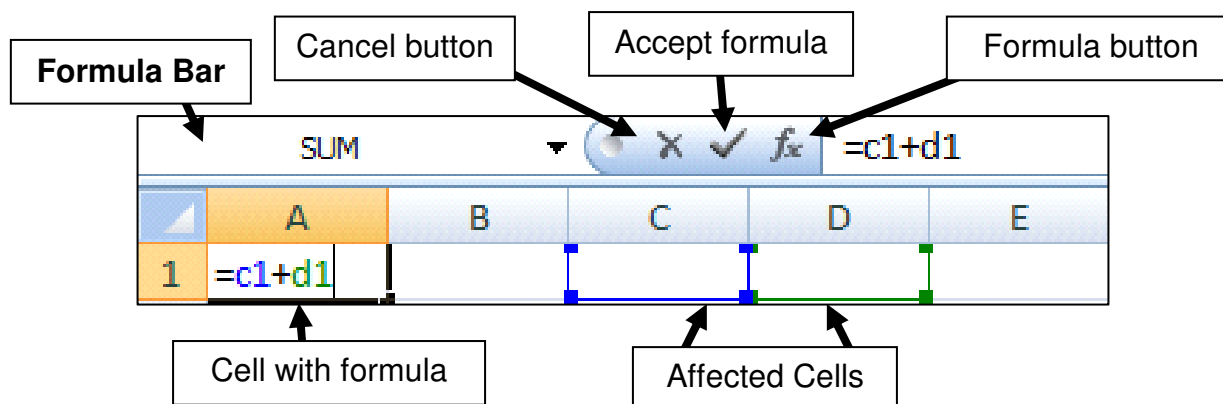
The example below shows the discount price being subtracted from the list price.

Example: To get the sale price, the formula should look like this

	A	B	C	D
	Sold	List Price	Discount	Sale Price
2	12	\$550.00	\$75.00	\$475.00

To enter a formula

1. Click on a cell where you want the answer to appear
2. Type an equal sign to begin the formula
3. Type formula ,when finished, press enter



Basic mathematical symbols

+ Addition	- Subtraction	/ Division	* Multiplication	^ Exponentiation
------------	---------------	------------	------------------	------------------

Example: $3+2-4*7/2^5$ or 3 **plus** 2 **subtract** 4 **multiplied** by 7 **divided** by 2 with an **exponent** of 5

The order of mathematical operations is important.

<u>P</u> lease	<u>E</u> xcuse	<u>M</u> y <u>D</u> ear	<u>A</u> unt <u>S</u> ally
<u>P</u>arentheses	<u>E</u>xponents	<u>M</u>ultiply or <u>D</u>ivide	<u>A</u>dd or <u>S</u>ubtract
Operations inside of parentheses () are done first	Exponential calculations are second , like 5^{3rd}	Multiplication and Division are done third	Addition and subtraction are done last

Types of Reference numbers

Relative references

As we move down the arrows point to different shapes

- ↔ ○ **B6+C6**
- ♥ ↔ ♥ **B7+C7**
- △ ↔ △ **B8+C8**

The shapes are relative to their arrow's position

Formulas work the same way As we fill-in the formula will change

Reference Numbers are the addresses for every cell in the spreadsheet.

Be careful to use the correct reference numbers

Absolute references

If we do not want it to be relative, we add **\$\$**

- ↔ ○ **B6+C6**
- ♥ ↔ ♥ **\$B\$6+C7**
- △ ↔ △ **\$B\$6+C8**

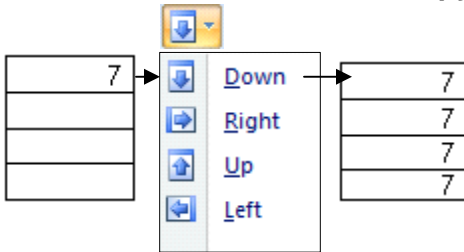
It is like a nailing part of the formula to one cell

Dollars signs stop the part of the cell they precede from moving From **A7** to **SA\$7**

Copying Formulas

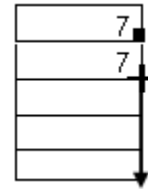
Two ways

Click on the cell you want **repeated** Hold down and drag till you highlight the cells you want filled



Then click the fill button and choose down

Click on the cell you want repeated Point to the tiny square in the bottom right hand corner of the cell



Wait for the **black cross**, not the black compass Hold down and drag till the cell are filled

Functions

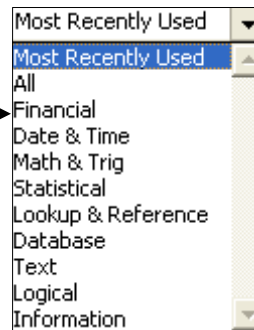
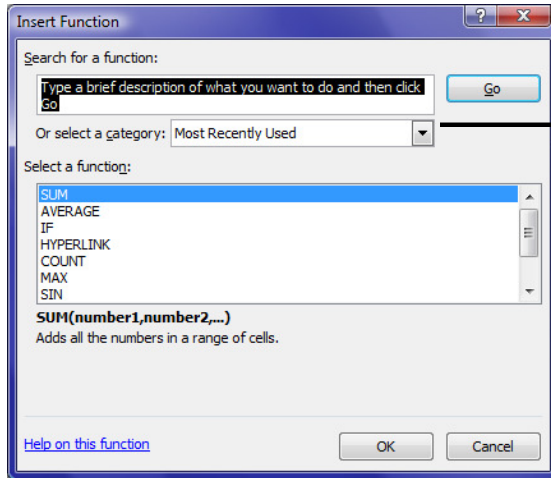
To use

Click on a cell to put. Click the **function button** on the toolbar



Choose a category and then a function

Press OK



A function is a shortcut formula that performs special calculations.

For example

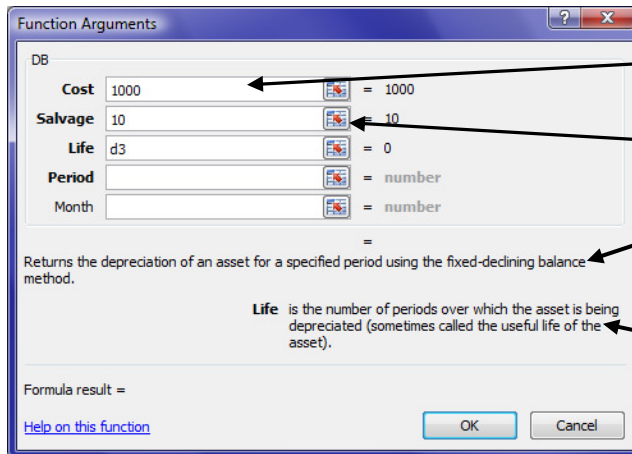
The **SUM** function is used to add many cells together. Adding cells **A4**, **A5**, and **A6** without functions would look like **=A4+A5+A6**.

However with the function it appears as: **=SUM(A4:A6)**

Fill in the information in the boxes if you know the answers but if the information is in a certain cell use the **expand/collapse buttons** to choose a cell from the spreadsheet



When finished press **OK** or if you made a mistake choose **Cancel**



Type Here

Collapse button

Definition of the function

Definition of parts of argument