An Introduction to Microsoft Excel

Microsoft Excel

- Microsoft Excel is a spreadsheet software capable of analyzing and visualizing data.

- Excel is extremely useful tool that can save you an enormous amount of time by performing calculations at scale.

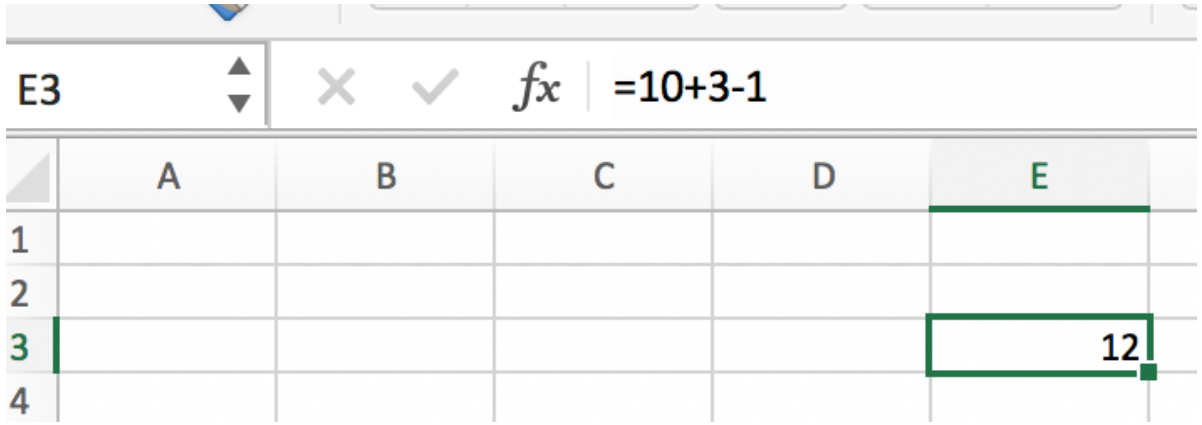
- Here is a rough rule of thumb:
  - If anything in Excel (apart from typing a formula) takes longer than a second, there's probably a faster method.

- Understanding tabular data and Excel formulae will help when we start programming in python.

Excel Formulae

- An Excel formula is an equation that will automatically perform calculations for you.

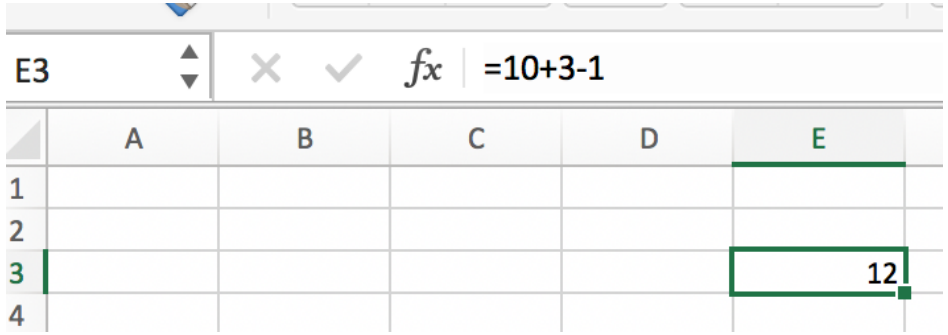
- A formula can be initiated by beginning your entry with the equal sign.

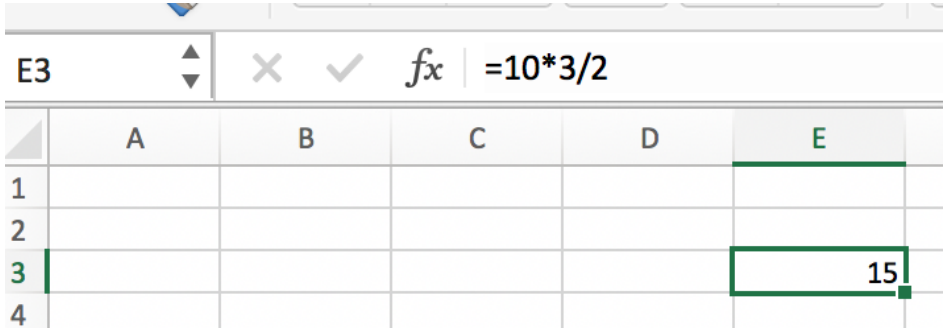


Mathematics in Excel

- +, addition
- -, subtraction
- *, multiplication
- /, division
- ^, exponentiation

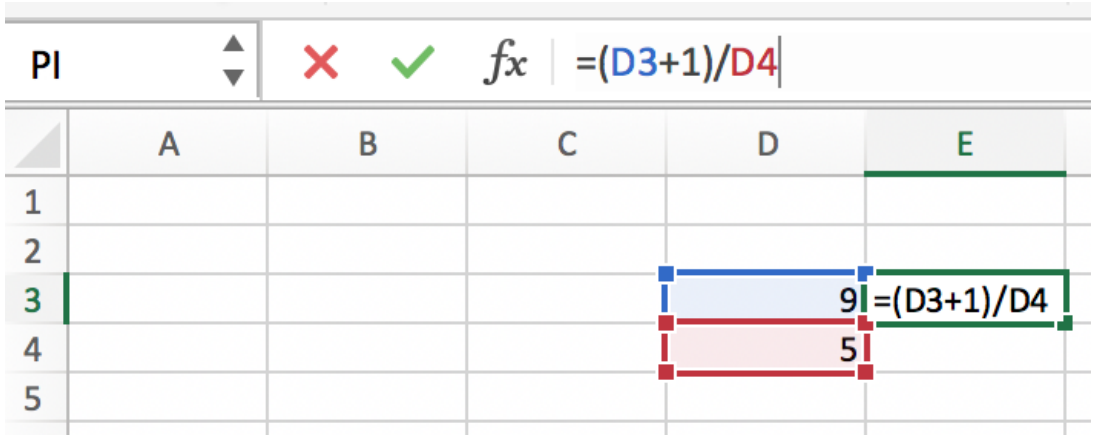
- There are also useful, built-in functions like SUM(), AVERAGE(), etc.





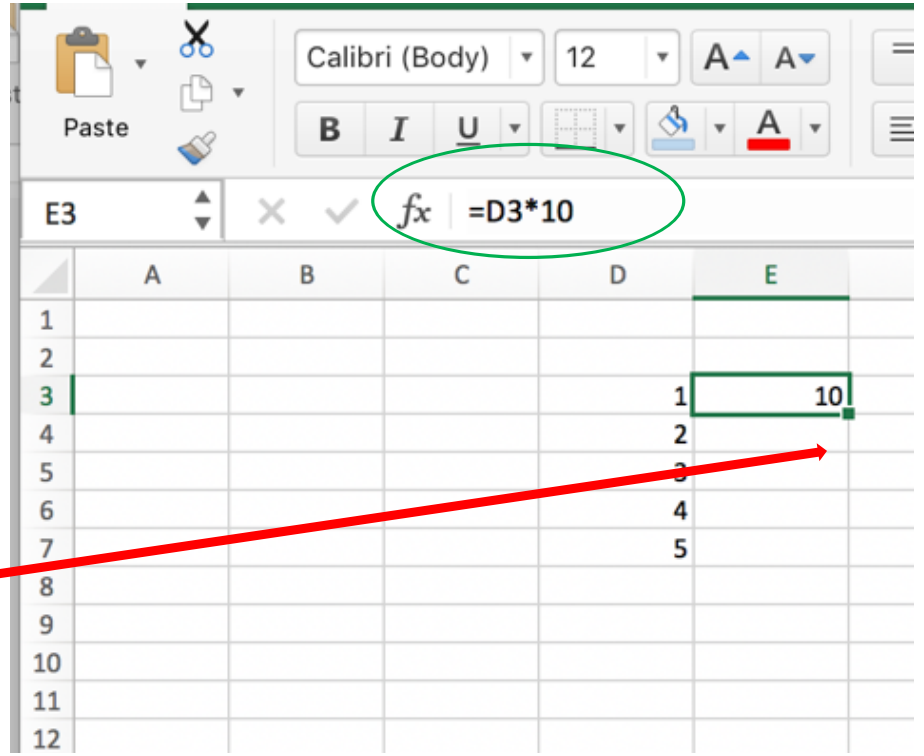
Cell References

- A formula can reference another cell by name, and will automatically update when the cells referenced are changed.

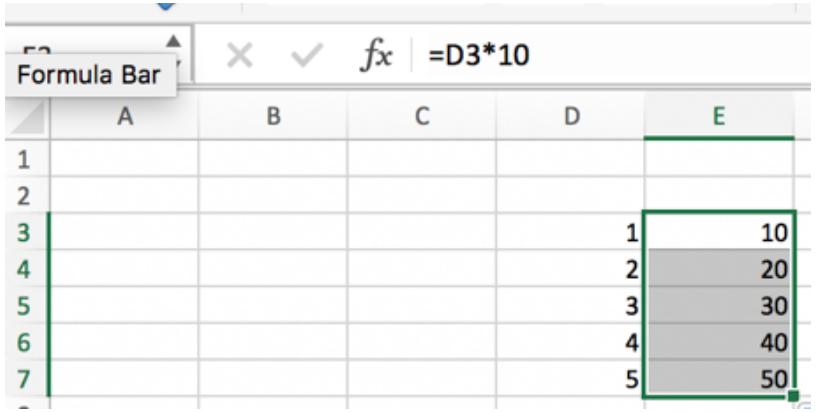


The “Fill Handle”

- Once a formula is entered at the top of a column, the formula can be ‘copied’ down the column by double clicking the fill handle.



- If there is a reference to a cell, that reference will also move down its column.



Freezing Cell References

- If, on the other hand, you do NOT want a cell reference to change, you can ‘freeze’ the cell reference in the formula with the dollar sign symbol.
  - Place a $ in front of the column name to prevent the column from changing.
  - Place a $ in front of the row number to prevent the row from changing.