Absolute cell references

Pressing function key F4 after clicking on a cell will add $ signs and changes A5 to $A$5. This makes the cell an absolute reference which won’t change if the cell is copied.

By repeatedly pressing F4 (or editing manually), the $ can just make the row or column fixed.

Define names

Defining a name can make formulae easier to read and will fix the location of data. Highlight the cells and click on the Formulas menu and on define name.

The name may be picked up automatically or you can change it.

The refers to can be a single cell or a range.

To use the name either click on the Formulas menu and Use in formula.

Order of evaluation

Formulae follow the BODMAS system where Brackets and Ordinances are more important than Divide and Multiply which are more important than Add and Subtract.

In practice this means that A1*A2+1 will multiply the two cells before adding one. Often brackets will help clarify e.g. A1*(A2+1) the one is added to A2 and then the result multiplied by A1.

Types of pasting

There are many types of pasting. Of particular note are:

- Transpose to swap a column for rows or vice versa.
- Paste Values will fix the results of calculations as if the result numbers had just been typed in.
- Paste link will create copies of cells linked back to the originals.
IF

=if(CHECK, YES, NO)  returns YES if CHECK is true, otherwise returns NO
=if(CHECK1, =if(CHECK2, YES, NO1), NO2) if commands can be nested to make further checks

Countif

=countif(RANGE, FIND)  counts how many times FIND appears in cells in RANGE
=countifs(RANGE1, FIND1, RANGE2, FIND2)  counts times both FIND1 appears in RANGE1 at the same position down as FIND2 in RANGE2

String Functions

=left(CELL, CHARS)  finds the left CHARS characters from CELL
=mid(CELL, START, CHARS)  finds CHARS characters from CELL starting from START
=right(CELL, CHARS)  finds the right CHARS characters from CELL
=len(CELL)  returns the length of the string in CELL
=find(FIND, CELL, START)  finds the position of FIND in CELL (optionally after START)

Concatenate &

The & function in Excel provides an easy way to join text together.
= A1 & “ “ & A2

vlookup

Fails for non-sorted lists. Here the search gets down to grape and stops with the previous find.

Lookup using Match and Index

To find matches in unsorted data use the index and match functions.

=INDEX(B13:C19, MATCH(D13, B13:B19), 2)
Index(ALL data, MATCH(Search for, In column) First exact match)