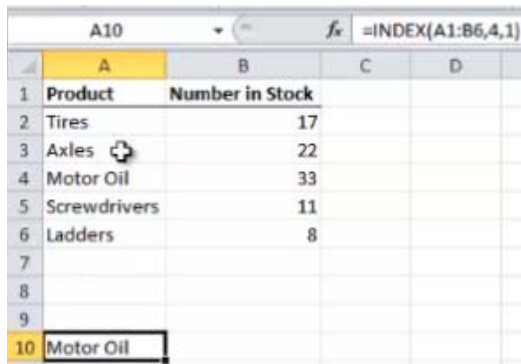# 5. FUNCTIONS

5.1 INDEX MATCH FUNCTION

The INDEX function (enter into spreadsheet) returns a value or reference of the cell at the intersection of a particular row and column, in a given range. It's syntax is:

=INDEX(array, row_num, [column_num])

Using the INDEX function

So, as an example type into A10 =index(A1:B6,4,1). The first argument is "array" so we specify our table which is A1 through B6. Next argument is row number, and that's row 4, and the final argument is column number, and that's column 1. The function should return what is at the intersection of row 4, column 1. So, hit enter, and we see that it returns the text string MOTOR OIL which is correct. So the INDEX function basically looks up values for us as well.

Let's look at another function called MATCH. It's syntax is:

=MATCH(lookup_value, lookup_array, [match_type])

The MATCH function returns the relative position of an item in an array that matches a specified value in a specified order. It takes 3 arguments: the lookup value, the lookup array, and the match type, in which we can specify if we want an exact match or not. Let's take an example of using the INDEX and MATCH functions at the same time.

Let's use them to find out how many widgets we have in stock. In B10 enter the formula:
=INDEX(A2:B6,MATCH(A10,A2:A6,0),2)