



Other Excel Functions

All the excel functions you've learnt until now are great and have allowed you to do a lot, but it's a lot more powerful!

Date Functions

MONTH () : the office.microsoft.com website is a source of information about this function. It includes:

- Description: Brief description
- Syntax form: How you use the function with all its arguments
- An example: Helps you see how to use the function

Let's use these functions. Please refer to the Excel sheet on the course website.

- Apply formula =MONTH (A2) to column E and drag it down.
- Once that is done, we can get a lot of useful information from the same data set by using the date as a filter while performing, for example, a COUNTIFS () function.
- Similarly, you can use DAY () and YEAR () .

New function: WEEKDAY () (again, please use the office.microsoft.com website as a reference)

- Apply formula =WEEKDAY (A2) to another column and drag it down.
 - This gives you the day of the week for a given date.
 - Why do we need this function?: it's great to filter data based on the day of the week. It allows you to, for example, see how much you spent on a Saturday by using a SUMIFS () function.
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RAND ()

A random number generator. We used this throughout the course in both Scratch and JavaScript; now we can see how to use it in Excel. Refer to office.microsoft.com to understand how the function works.

RAND () : randomly chooses a value from a uniform distribution of fractions between 0 and 1.

- Why would you use this function?: It can be useful to run simulations over the data you have.

Example: Sheet2 of the Excel sheet on the course website. How would this simulation work?

- First, we assign a random number to each purchase.
- We then compare it with the estimated purchase.
- If that estimate is less than the expected we assume the product was not bought.



- Finally, we sum the prices of the purchased products. This is the total amount of a purchase made by a single customer.
- We then copy our formula by dragging the formula down (after locking the appropriate fields).
- Finally, we have customers for a whole hour. We then sum all of their probable purchases.
- To get multiple simulation runs, we refresh the excel sheet by pressing F9 on a PC or command F9 on a Mac.

This is an awesome function as it gives you a feel for simulation and modelling. You can account for changes like advertising by updating the probability of a product being purchased.

PMT ()

PMT () is a nice function for business students that calculates payment for a loan. For more information, please refer to office.microsoft.com.

Example: Sheet3 of the Excel sheet on the course website.

- Enter `=PMT (C2/12, C5*12, C3)` into C7
- We used this to calculate how much this would cost you over the term of the loan.

This function helps you understand the concept of the time value of money.

There are a lot more functions, so explore Excel!