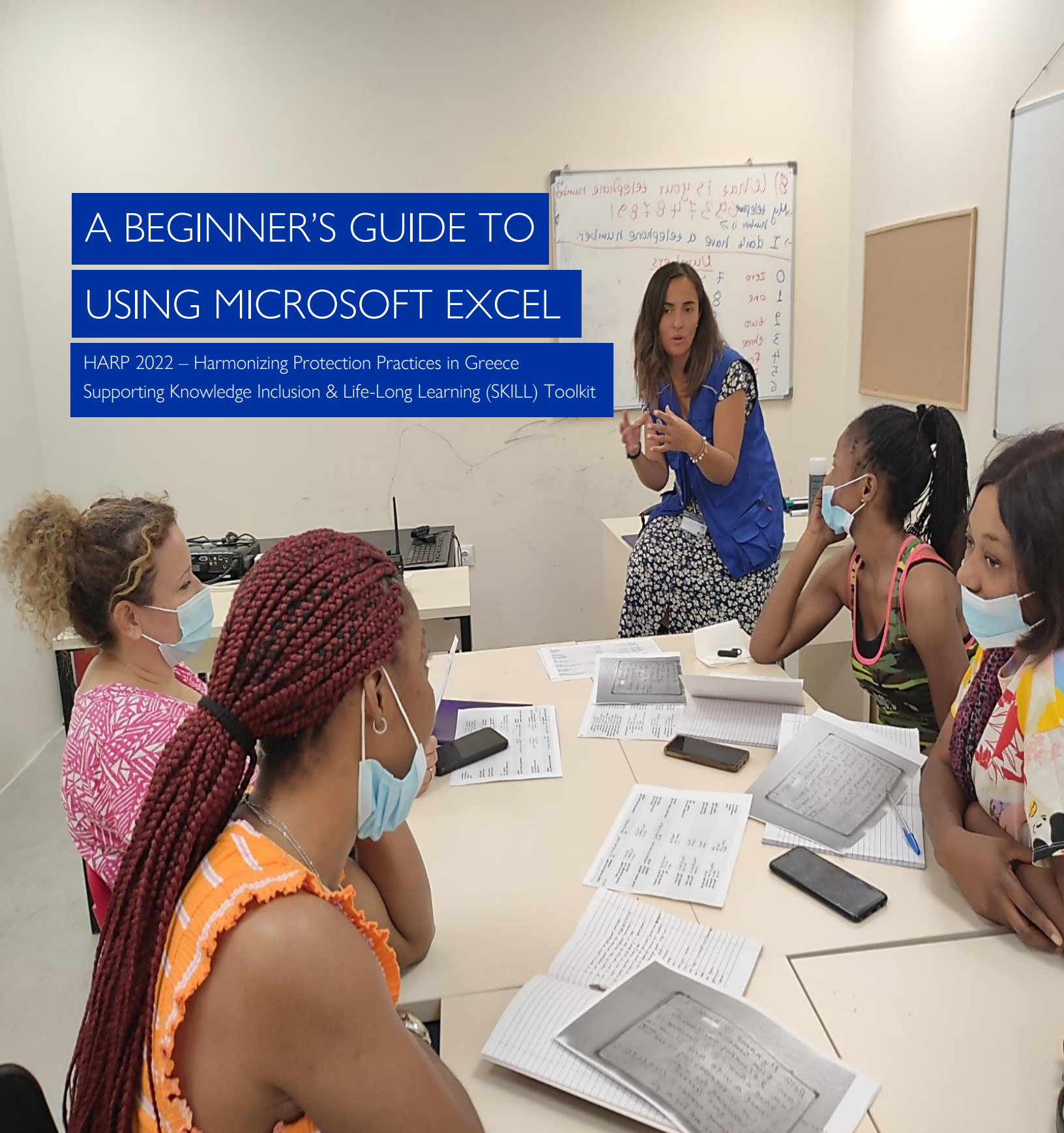


A BEGINNER'S GUIDE TO USING MICROSOFT EXCEL

HARP 2022 – Harmonizing Protection Practices in Greece
Supporting Knowledge Inclusion & Life-Long Learning (SKILL) Toolkit





A beginner's guide to using Microsoft Excel

Skills Development Pillar
HARP 2022



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Contents

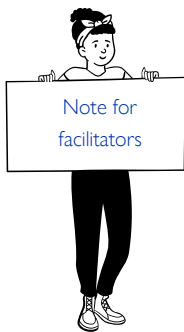
INTRODUCTION.....	- 3 -
Excel Cell.....	- 4 -
Excel Range.....	- 4 -
Excel Worksheet.....	- 5 -
Excel Workbook.....	- 5 -
EXCEL RIBBON.....	- 6 -
PRINT.....	- 9 -
COMPLETING A SERIES	- 9 -
INSERT A ROW OR COLUMN	- 10 -
FIND & REPLACE.....	- 11 -
LONG WORDS AND NUMBERS.....	- 11 -
BASIC CALCULATIONS	- 12 -
IMPORTANT EXCEL SHORTCUTS.....	- 13 -
EXERCISES	- 14 -

INTRODUCTION

Introduction

Excel is the world's most popular spreadsheet software, developed by Microsoft. Excel can be used for complex calculations, but you can always use it to type regular text, just like you would do in Word or any other application. All you have to do is to select one of the cells by clicking on it and start typing. When you finish typing, hit the Enter key to exit the cell edit mode.

- ✓ You can open the Excel also by searching it in the taskbar's search! Just press the Windows key and type "Excel".



Shortcut keys perform major functions that, when used instead of the mouse, dramatically increase efficiency and speed. Although this is an important thing, the students should first learn the correct way. The rule of thumb is that: Use shortcuts only when you know how to do the same thing without the shortcuts! Key shortcuts will be displayed as Orange Capital Letters.

Let's discuss some of the basics in Excel:

1. Excel Cell
2. Excel Range
3. Excel Worksheet
4. Excel Workbook

Why Should I Learn Microsoft Excel?

We all deal with numbers in one way or the other. We all have daily expenses which we pay for from the monthly income that we earn. For one to spend wisely, they will need to know their income vs. expenditure. Microsoft Excel comes in handy when we want to record, analyze, and store such numeric data.

For what other reasons someone would organize data?

Supermarkets have items of related categories close to each other. Let's say you want to buy 100 things and you write them on a paper. If you categorize the things, it will help you find the items easier. The meaning of this is that it may be easier to remember 3 or 5 things by themselves. But in the future, where a list may contain 1000 or 5000 things, it is important to categorize the information, so you can filter through them later.

Below are some sites related to excel practices that you might be interested in:

<https://www.goskills.com/Course/Excel>

<https://howtoexcel.teachable.com/p/dashboard-course>

<https://support.microsoft.com/en-us/excel?ui=en-us&rs=en-us&ad=us>

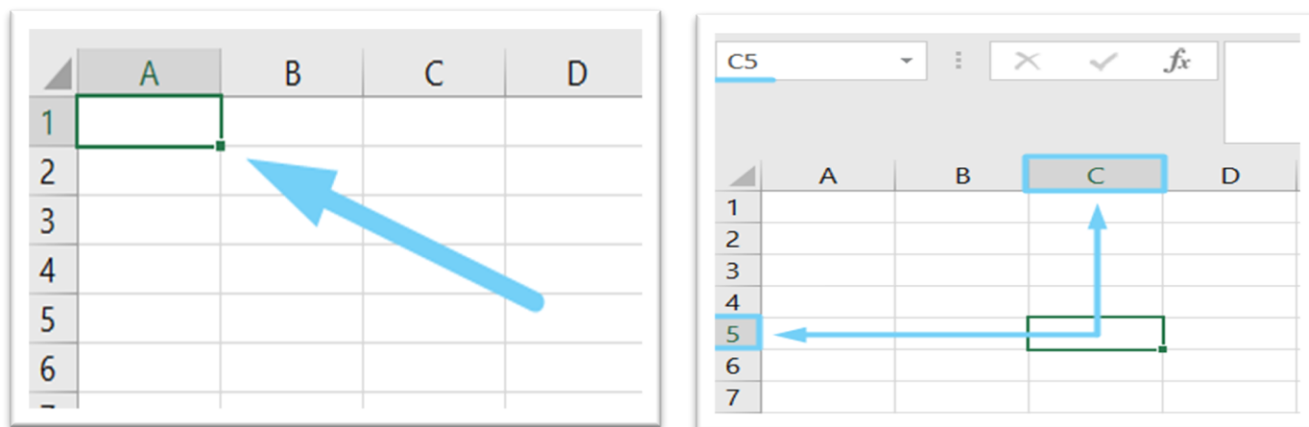
<https://excelexercises.com/lessons.html>

<https://excel-practice-online.com/>

Excel Cell

The Cell is the smallest unit in Excel. The cell is used to store data. Excel is comprised of **rows** (↔) and **columns** (↓). The rows are represented as numbers (1, 2, 3,...), and the columns as letters. To reference a specific cell in Excel, we will type its column letter, followed by the row number.

So, **A1** will be the first cell in your worksheet – It is in the first column (**A**), and in the first row (**1**):



To find the Name Box, all you have to do is to look straight **UP** and **Left** of the cell.

- ✓ You can resize the cells in Home > Cells > Format. You can do that also individually by moving the mouse between 2 Columns/Rows and when the cursor will change to this: (↔/↓), drag and drop to resize!
You can also double-click that spot to auto-align the Column/Row
- ✓ To select all the spreadsheet (Ctrl + A) and by resizing one Column/Row, it resizes them all the same.

Entering Text: To Enter text or a number in a cell, click a cell, type the numbers, or text that you want to enter, and then press **ENTER** or **TAB**. To enter data on a new line within a cell, enter a line break by pressing **Alt + ENTER**

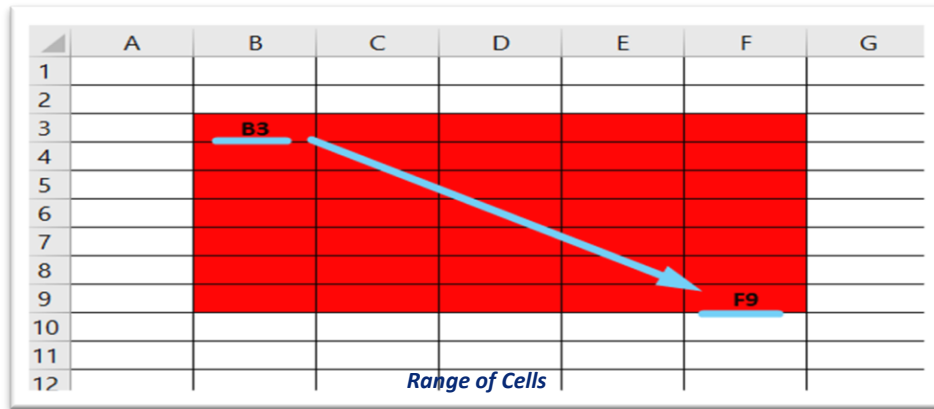
Excel Range

In Microsoft Excel, a range is a collection of Cells. These cells can be in the same Row, the same Column, or even in different Rows and Columns! Place the mouse cursor over a Cell, press and hold down the left mouse button, then move the mouse while still holding down the left mouse button.

- ✓ You can also select a group of nearby Cells using **Shift** button. Click on a Cell and then, while holding **Shift**, select the other Cell diagonally.

Each range is represented by two cells – The top-left cell, and the bottom-right cell, separated with colons (:).

For example, Range **B3:F9** consists of the following cells:

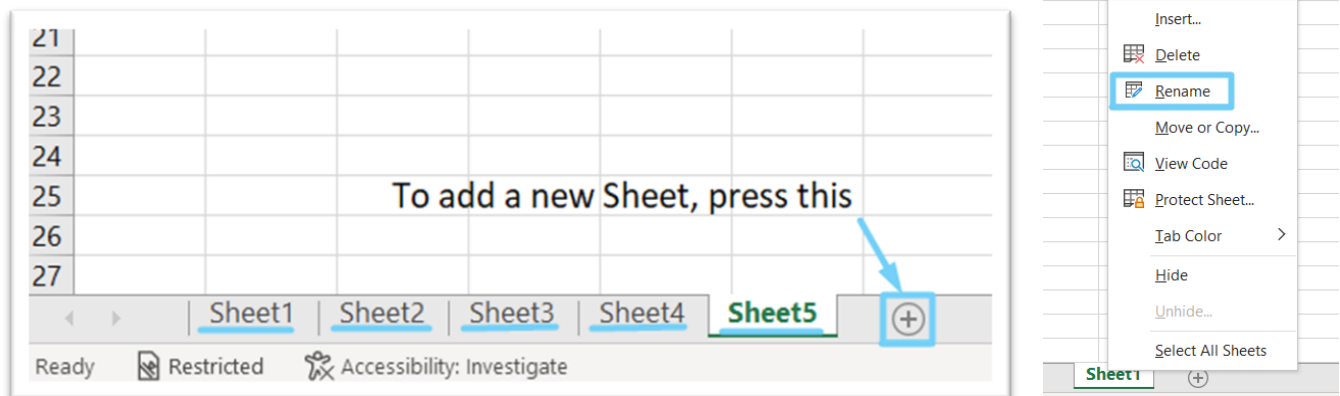


- ✓ Another important way to select separate Cells is using the **Ctrl** button. Click on a Cell and then, while holding **Ctrl**, select the Cells you want.

Excel Worksheet

The Excel Worksheet is comprised of rows and columns. The default Excel Worksheet contains 1,048,576 rows and 16,384 columns. By default, the sheets are named: Sheet1, Sheet2, etc.

You can rename the sheet names to more meaningful names i.e., Daily Expenses or Monthly Budget. In the following image, we have five different worksheets:



- ✓ You can do this by Double Clicking it or by Right Click on the Sheet and selecting Rename
- ✓ To Navigate between your Worksheets, you can press Ctrl + PgUP / Ctrl + PgDn .

The Worksheet by itself has **Grid** and **Headings**.

Excel Workbook

The Excel file is also called Excel Workbook. It contains one or more worksheets. The default Excel file type has an .xlsx extension. Excel allows the user to use data from one worksheet in another worksheet in the same workbook.

- ✓ You can navigate between your Apps with Alt + Tab.
- ✓ You can navigate between your Workbooks with Ctrl + Tab.

Ribbon TABS:

- ✓ **File** – allows you to jump into the backstage view that contains the essential file-related commands and Excel options.
- ✓ **Home** – contains the most frequently used commands such as copying and pasting, sorting, filtering, formatting, etc.
- ✓ **Insert** – is used for adding different objects in a worksheet such as images, charts, hyperlinks, special symbols, equations, headers, and footers.
- ✓ **Draw** – depending on the device type you are using, it lets you draw with a digital pen, mouse, or finger. This tab is not visible by default.
- ✓ **Page Layout** – provides tools to manage the worksheet appearance, both onscreen and printed. These tools control theme settings, gridlines, page margins, object aligning, and print area.
- ✓ **Formulas** – contains tools for inserting functions, defining, and controlling the calculation options.
- ✓ **Data** – holds the commands for managing the worksheet data as well as connecting to external data.
- ✓ **Review** – allows you to check spelling, track changes, add comments and notes, protect worksheets and workbooks.
- ✓ **View** – provides commands for switching between worksheet views, freezing panes, viewing, and arranging multiple windows.
- ✓ **Help** – only appears in Excel 2019 and Office 365. This tab provides quick access to the Help Task Panel and allows you to contact Microsoft support, send feedback, suggest a feature, and get quick access to training videos.
- ✓ **Developer** – provides access to advanced features such as VBA macros, ActiveX and Form controls and XML commands. This tab is hidden by default, and you have to enable it first.
- ✓ **Add-ins** – appears only when you open an older workbook or load an add-in that customizes the toolbars or menu.

A contextual tab is a hidden tab in the Office ribbon that is displayed in the tab row when a specified event occurs in the Office document. For example, the Table Design tab that appears on the Excel ribbon when a table is selected. If the Tool Tabs specific to a particular object (such as a chart or image) are missing, that object has lost focus. For the contextual tabs to appear again, simply select/press the object.

What are Gridlines in Excel?

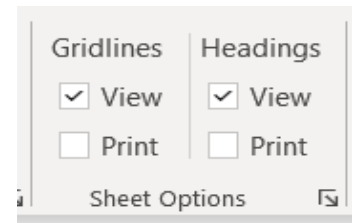
- Gridlines in Excel are the horizontal and vertical gray lines that differentiate between cells in a worksheet. They help users navigate through the worksheet columns and rows with ease.
- Gridlines are visible on the entire worksheet and cannot be applied to a specific region of the worksheet compared to the Cell Borders. Also, when printing a worksheet, the Gridlines on the paper, whereas any borders applied to the worksheet appear on printed worksheets.
- The gridlines and Headings can be turned Off-view / Off-print from the Sheet Option group in the Page Layout Tab, as seen in the image below. To see the effect of not printing the Gridlines or Headings, verify the action pressing Ctrl + P to see the Print Preview.

Cell Borders

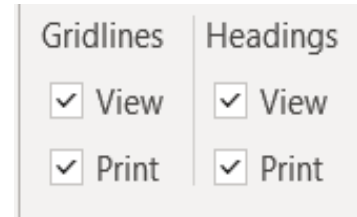
- ✓ The Cell borders can be selected from **Font** group in the **Home** Tab.

The characteristic icon for Cell Borders is this .

There is a wide range of options to select. Just remember to first select the cells that you want to add borders to.



- ✓ Here we have an **A1:B6** range with some numbers. (Figure1)
First select the range **B1:B6** and add All Borders. (Figure2)
Then select the Range **A1:B6** and go to **Print preview**. (Figure3)
Then go back to Sheet Option and check the Print box in Gridlines and in Headings.



After This step see the print preview again, it will look different!! (Figure4)

	A	B
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Figure 1

	A	B
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Figure 2

1	1
2	2
3	3
4	4
5	5
6	6

Figure 3

	A	B
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Figure 4

1. Click FILE > Print. You can also press Ctrl + P.
 2. Click the Print button or adjust Settings before you click the Print button.
- ✓ Print Excel worksheets. You can also print a partial worksheet, such as an Excel table. Select the worksheets/Range that you want to print.

COMPLETING A SERIES

How to Fill a Column/Row with an increasing series of numbers.

- ✓ Select the first cell in the range that you want to fill.
- ✓ Type the starting value for the series (ex. 0-1-2-3-4...)
- ✓ Type a value in the next cell to establish a pattern. ...
- ✓ Select the cells that contain the starting values.



- ✓ Drag the fill handle (bottom corner of the cell).

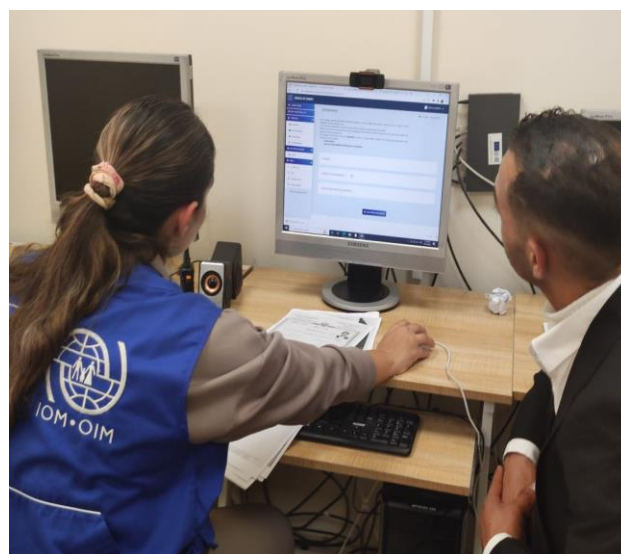
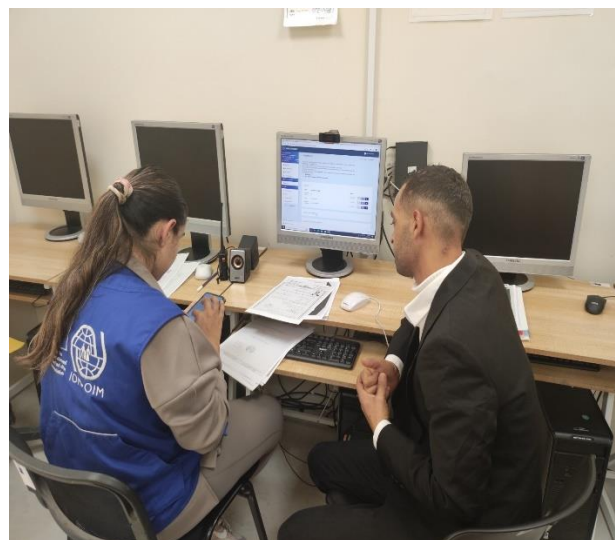
You can always check Home> Editing> Fill (Alt > H > FI)

Series Settings:

- ✓ Now let's say you want to do a series as multiplication of (2).
1. Type in each cell the pattern you want to follow. In our case its 0-2-4-6...
 2. Then select the cells you want to fill-in with the series.
 3. In the (Alt > H > FI > S) . Select the Step Value as 2 . Then ENTER.

Explore the other setting such as Type and Stop Value.

- ✓ Another Fill Option is the **Copy Cells** which just copies the value of the first cell in all the others.
- ✓ Fill : Down/Up/Left/Right copy from the respective cells!



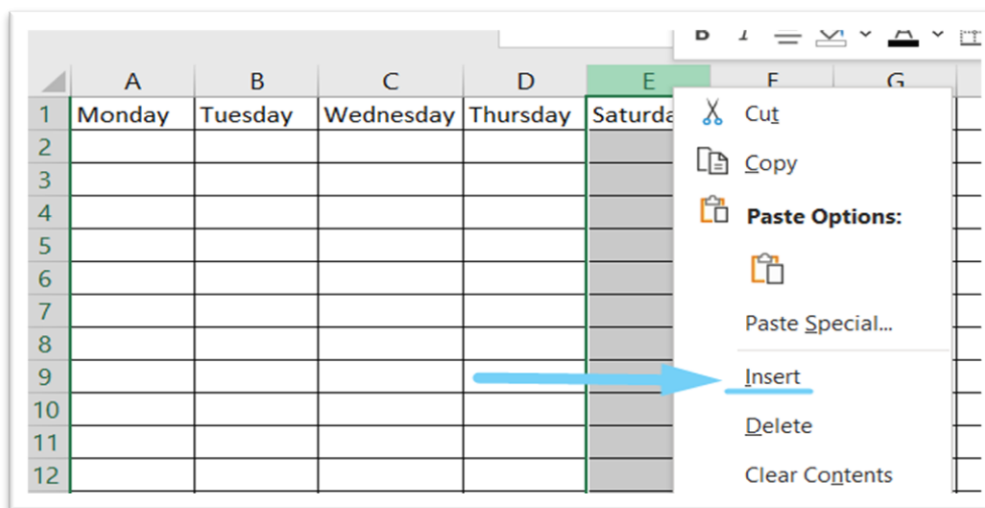
INSERT A ROW OR COLUMN

All you have to do is to Insert one! Let's see an example:

- ✓ Here we have the 7 days of the week. But as we can see, Friday is missing!

	A	B	C	D	E	F
1	Monday	Tuesday	Wednesday	Thursday	Saturday	Sunday
2						
3						

- ✓ To add a column between D and E, you have to Right Click on the "E" Column and select the **Insert**!



- ✓ This will create a new "E" column and will move everything to the right!

	A	B	C	D	E	F	G
1	Monday	Tuesday	Wednesday	Thursday		urday	Sunday
2							

The same can be done for Rows too! Right Click the "5th" Row and Insert.

- ✓ To add multiple rows or columns in a spreadsheet, highlight the same number of preexisting rows or columns that you want to add. Then, right-click and select "Insert."

	A	
1	Monday	
2	Tuesday	
3	Wednesday	
4	Thursday	
5	Saturday	
6	Sunday	
7		
8		

	A	
1	Monday	
2	Tuesday	
3	Wednesday	
4	Thursday	
5		
6	Saturday	
7	Sunday	
8		

FIND & REPLACE

Use the Find and Replace features in Excel to search for something in your workbook, such as a particular number or text string.

Find:

To find something, press **Ctrl + F**, or go to Home > Editing > Find & Select > Find.

- In the **Find what:** box, type the text or numbers you want to find. Then press either Find All or Find Next.

Replace:

To replace text or numbers, press **Ctrl + H**, or go to Home > Editing > Find & Select > Replace.

- In the **Find what:** box, type the text or numbers you want to replace and then, in the **Replace with:** enter the text or numbers you want to use to replace the search text. Then press either Replace All or Replace.

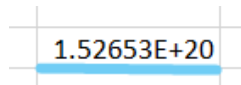
Tips:

You can use **wildcard characters** in your search criteria. These are: question mark (?), asterisk (*), tilde (~)

- ✓ Use the question mark (?) to find any single character, for example, s?t finds "sat" and "set".
- ✓ Use the asterisk (*) to find any number of characters, for example, s*d finds "sad" and "started".
- ✓ Use the tilde (~) followed by? *, or ~ to find question marks, asterisks, or other tilde characters, for example, fy91~? finds "fy91?".

LONG WORDS AND NUMBERS

After you enter a long number (such as a credit card number) in an Excel Cell, the number may not be displayed correctly, and it may look like this:

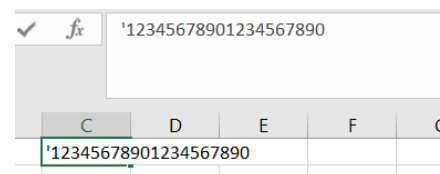


The Default number **format** in Excel is General therefore you can display **up to 11 digits in a cell**. This can be solved with 2 ways:

- ✓ **Use a single quotation mark**

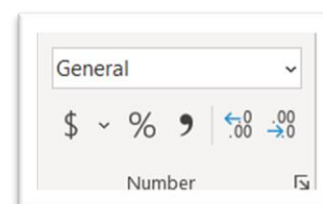
When you enter a long number, type a single quotation mark (') first in the cell, and then type the long number.

For example, type: '12345678901234567890 and the quotation mark will not be displayed after you press ENTER.

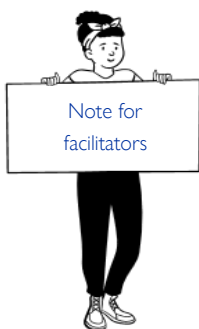


- ✓ **Format the Cell**

1. Right-Click the Cell you want, and then click **Format Cells...**
2. On the Number Tab > Category: > Select **Text**, and then click **OK**
3. Then type the long number. (Be sure to set the cell format before you type the number)



You can do the same thing in: Ribbon > Home > Number > General



(Navigate and read all other categories and descriptions in Cell Formatting, talk about how the students would use them. Explain the importance of the Attribute. Imagine what kind of problems could emerge by wrong formatting)

BASIC CALCULATIONS

We can perform calculations in Excel easily. To start a calculation in a cell, we will type the = sign (equals), and then type our calculation. These are the basic operators which can be used:

+ Add – Subtract / Divide * (Asterisk) Multiply ^ Power

- ✓ So, let's say we want to find the result of 3+3:

	A	B	C
1			
2			
3		=3+3	
4			
5			

- ✓ Then, after pressing the Enter button, it will show this:

	A	B	C
1			
2			
3		6	
4			
5			

What is the order of operations used in Excel formulas?

This is a question designed to evaluate the foundational knowledge of Excel, but it also challenges the mathematical thinking. This can be answered in a straightforward way that correctly expresses the order of operations.

“Excel formulas follow **PEMDAS**. This acronym stands for **P**arenthesis, **E**xponents, **M**ultiplication, **D**ivision, **A**ddition and **S**ubtraction.”

IMPORTANT EXCEL SHORTCUTS

Practice all the shortcuts one by one both ways, with keyboard and the original way with mouse!

A plus sign (+) in a shortcut means that you need to press the keys one after the other, while they are still pressed.

F7	Open the spelling tool
Shift + F11	Creates a new worksheet
Ctrl + N	Creates a new workbook
Ctrl + S	Saves the current workbook
Ctrl + C	Copy contents of current select
Ctrl + A	Select all
Ctrl + Space	Select the whole Column
Ctrl + :	Today's date
Ctrl + P	Opens the Print window
Ctrl + Z	Undo last action
Ctrl + Y	Redo (reverses ctrl + z)
Ctrl + H	Find and replace
Ctrl + F	Find
Ctrl + V	Paste data from the clipboard
Ctrl + Shift + L	Apply Filter on current range
Ctrl + Shift + :	Current time
Shift + Space	Select the whole Row
Alt + =	Quick +SUM()
Shift + F2	Add a comment

EXERCISES

Exercise 1

Add some comments

Exercise 2

Create a multiplication table (0-10 × 0-10)

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Exercise 3

As a student, create an Excel where you record your attendance in the class every time, alongside with your preferred data.

Exercise 4

Do math exercises and use Excel as a calculator to get familiar.

Exercise 5

Find a specific action that you want to do, like turning colored text to the original, automatic Black color, then find the Shortcuts you need to press. In this example its Alt + H + FC + A. Then try to do it 20 times slow and correctly for muscle memory!

