

# Principles of Accounting

## LAB 3

### First Stage

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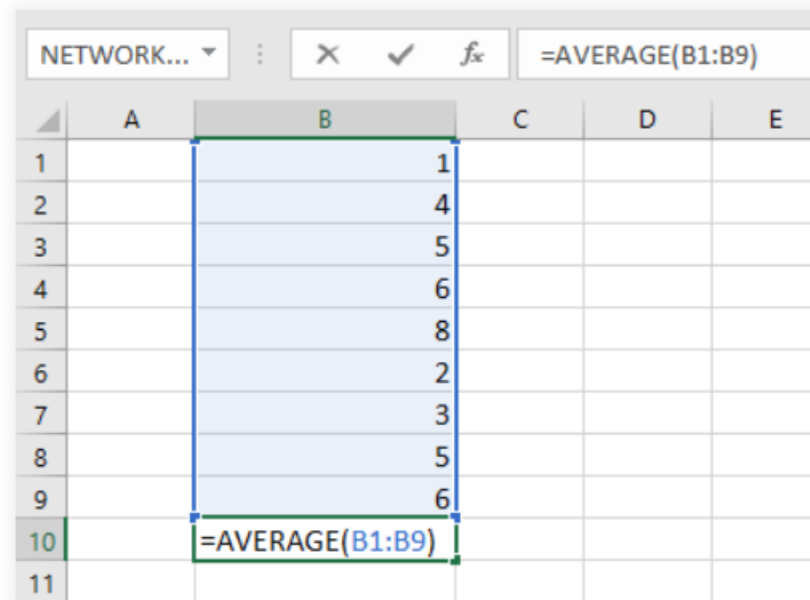
A list of the common functions:

- **SUM:** **adds** all of the values of the cells in the argument.
- **AVERAGE:** determines the **average** of the values included in the argument.
- **COUNT:** **counts** the number of cells with numerical data in the argument.
- **MAX:** determines the **highest cell value** included in the argument.
- **MIN:** determines the **lowest cell value** included in the argument.
- **POWER:** Returns the result of a number raised to a power.
- **INT:** Rounds a number down to the nearest integer.
- **SUMIF:** Sum the values in a range that meet Criteria.

# Arguments

Most of the Function requires inputs or information (Arguments) in order to calculate correctly. Argument can refer to both **individual cells (one cell range)** and **cell ranges** and must be enclosed within **parentheses**. You can include one argument or multiple arguments.

- For example, the function **=AVERAGE(A1:A9)** calculates the **average** of the values in the cell range **A1:A9** . This function contains only one Argument.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
1		1			
2		4			
3		5			
4		6			
5		8			
6		2			
7		3			
8		5			
9		6			
10		=AVERAGE(B1:B9)			
11					

The formula bar at the top shows the active cell B10 containing the formula `=AVERAGE(B1:B9)`. The spreadsheet also shows a 'NETWORK...' dropdown and icons for undo, redo, and insert functions.

Figure (14)

- In this example, the function **=SUM(A1:A3, C1:C2, E1)** will **add** the values of all of the cells in the three Arguments.
- \* Multiple arguments must be separated by a **comma**.

The image shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F
1	4		6		20	
2	8		10			
3	12					
4						
5	=SUM(A1:A3,C1:C2,E1)					
6						

The formula bar at the top shows the formula **=SUM(A1:A3,C1:C2,E1)**. The range A1:A3 is highlighted in blue, C1:C2 is highlighted in red, and E1 is highlighted in purple. The formula is entered in cell A5.

Figure (15)

# Function Examples

- Click the **cell** that will contain the function for example cell **F2**.
- Type the **equals sign (=)**, then enter the desired **function name** or select the desired function from the list of **suggested functions** that appears below the cell as you type. for example type **sum**.
- Then we choose the arguments range by clicking the first and drag to the last cell, then we press Enter.

The figure illustrates the process of using the SUM function in Excel across three stages:

**Stage 1: Initial Data and Function Selection**

	A	B	C	D	E	F	G
1		Arabic	Math.	English	Islamic	sum	
2	Ahmed	87	99	55	87	=sum	
3	bilal	70	86	64	56		
4	ali	88	60	74	64		
5	omar	96	43	77	56		
6	samer	45	77	90	77		
7	qais	37	56	65	58		
8	kamal	95	50	34	66		
9							
10							

**Stage 2: Range Selection**

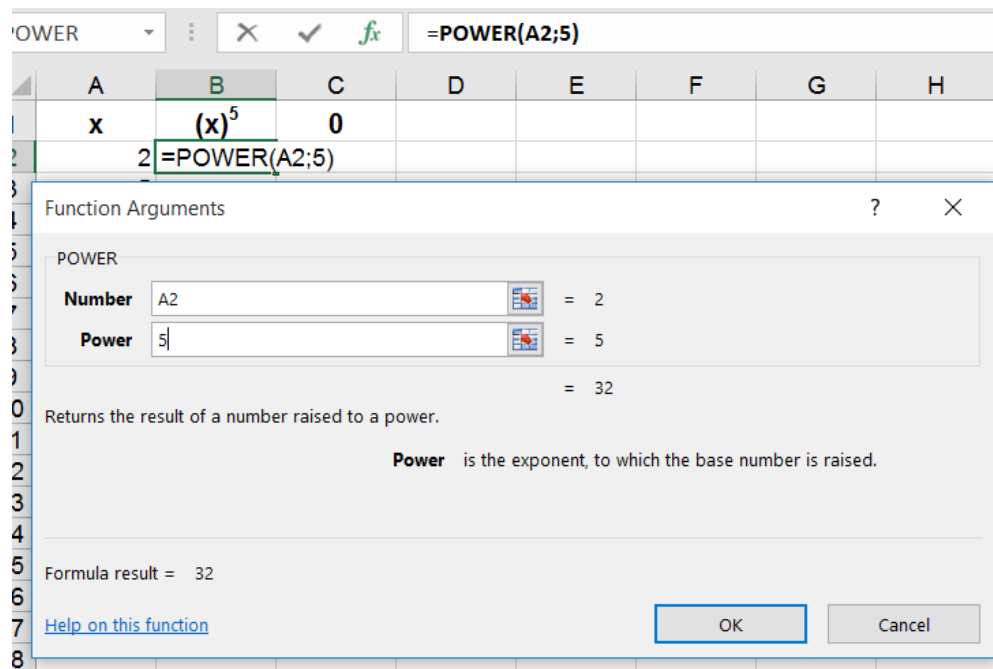
	A	B	C	D	E	F	G
1		Arabic	Math.	English	Islamic	sum	
2	Ahmed	87	99	55	87	=SUM(B2:E2)	
3	bilal	70	86	64	56		
4	ali	88	60	74	64		

**Stage 3: Final Results**

	A	B	C	D	E	F	G
1		Arabic	Math.	English	Islamic	sum	
2	Ahmed	87	99	55	87	328	
3	bilal	70	86	64	56		
4	ali	88	60	74	64		

Figure (16)

- In this example the function **POWER** are applied to the Argument in column (A) to calculate the value of (X ) raised to the power (5).
- In formula bar we typed the function Power and entered the Function Arguments **Number (A2)** and **Power (5)** and click OK.
- Then the function has been applied to the rest by dragging the corner of the rectangular down to the rest of the column (B).



	A	B	C	D	E
1	x	(x) <sup>5</sup>	0		
2	2	32			
3	5	3125			
4	1	1			
5	10	100000			
6	3	243			
7	5	3125			
8	7	16807			
9					

Figure (17)



In this example the function **SUMIF** are applied to the Arguments in column (B) and (C). where the cells in column B represent the **Range** Argument and column C the **Sum\_range** Argument of **SUMIF** function, and the Criteria for the **SUMIF** function here is (BIT), that means the function will add only the Degrees of the students in group (BIT)

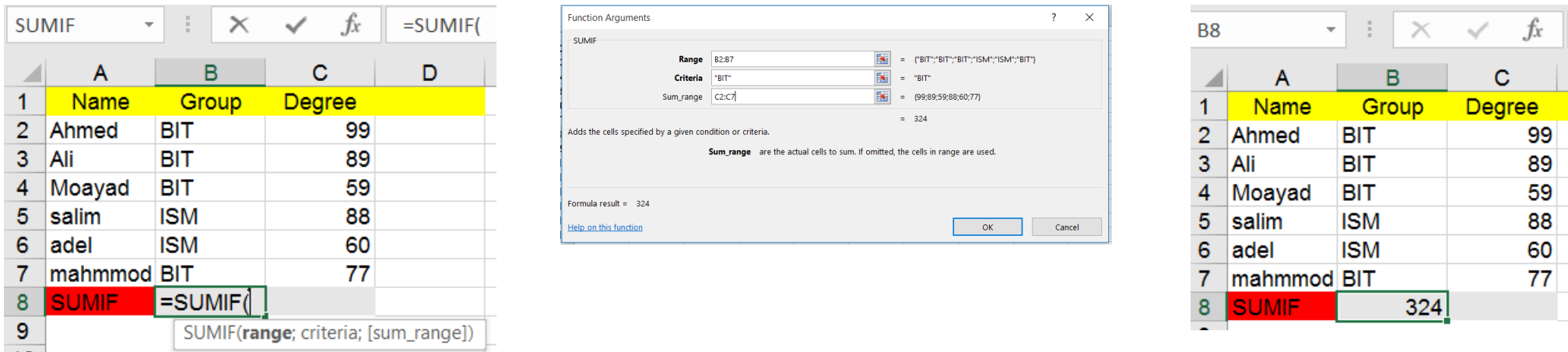


Figure (18)

**The End**

