

MICROSOFT EXCEL:

---

# The Ultimate Microsoft Excel Course.



# COURSE STRUCTURE & OUTLINE

Excel 101 Topic	Excel 102 Topic	Excel 103 Topic
<ul style="list-style-type: none"><li>1. Excel Fundamentals</li><li>2. Entering Data</li><li>3. Working with Functions</li><li>4. Modifying A Worksheet</li><li>5. Creating Charts</li><li>6. Printing Worksheet</li><li>7. Working with Templates</li></ul>	<ul style="list-style-type: none"><li>1. Excel List &amp; Tables</li><li>2. Master Excel Pivot tables</li><li>3. Excel PowerPivot Adin</li><li>4. Apply data Validation</li><li>5. List based Functions</li><li>6. Import &amp; Export</li></ul>	<ul style="list-style-type: none"><li>1. Dynamic Formulas</li><li>2. Logic Based Functions</li><li>3. Lookup Functions</li><li>4. Text Based Functions</li><li>5. Worksheet Protection</li><li>6. Auditing Formulas</li></ul>

# Excel 101 Topic

# Excel 101 Topic



1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates

## 1) Excel Fundamentals

1. Launching Excel.
2. Introduction to Excel Interface.
3. Customizing the Excel quick access toolbar.
4. Understanding the structure of Excel Workbook.
5. Saving an Excel document.
6. Opening an existing excel document.
7. Common excel shortcuts keys.

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

1) Entering text to create Spreadsheet titles.

	A	B	C	D	E
1	Monthly Budget				
2					
3					
4	Bills	Jan	Feb	Mar	Total
5	Rent				
6	Phone				
7	Credit Cards				
8	Food				
9	Gas				
10	Total				
11					

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

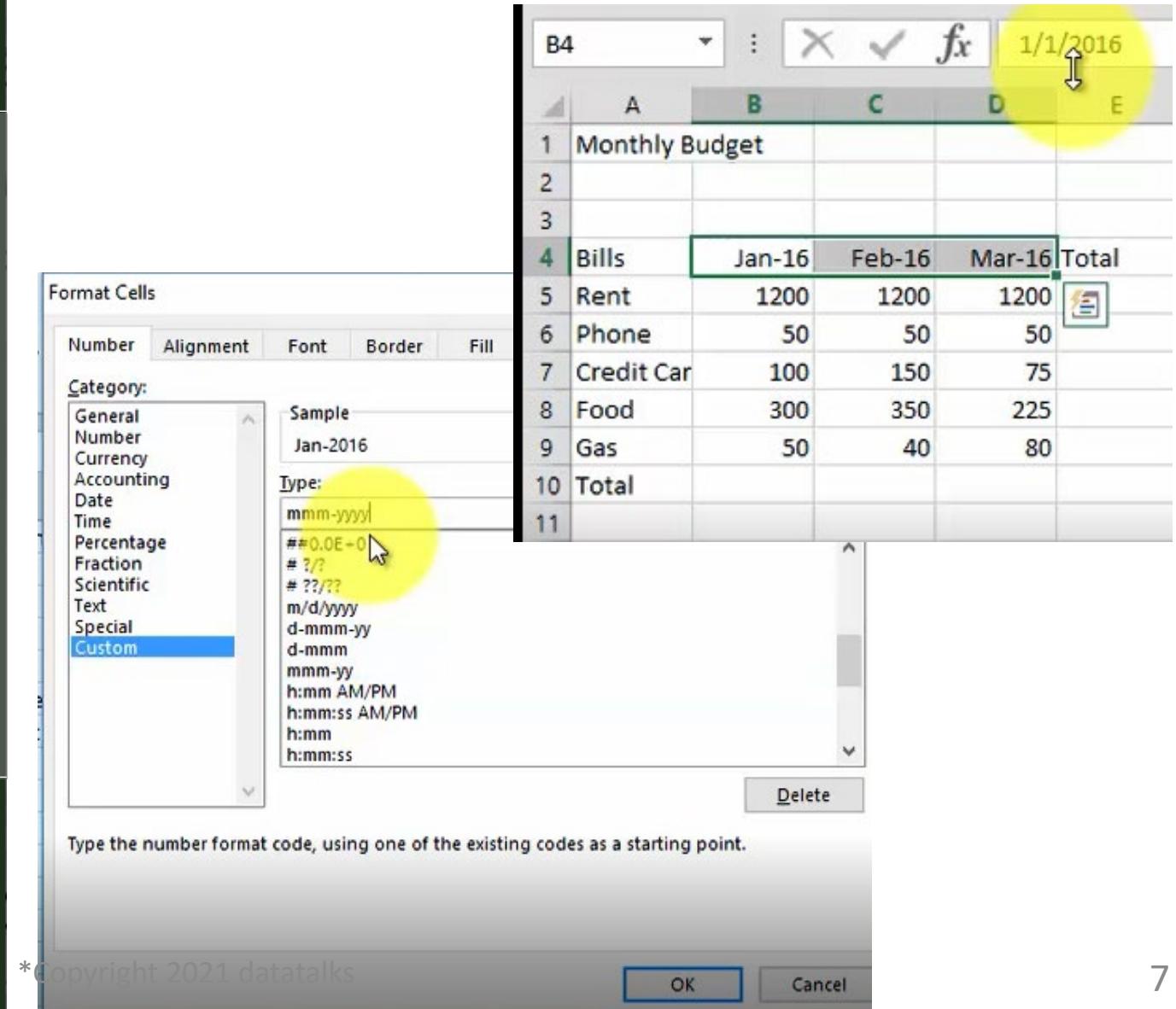
## 2) Working with numeric date in excel.

A	B	C	D	E
1	Monthly Budget			
2				
3				
4	Bills	Jan	Feb	Mar
5	Rent		1200	
6	Phone		50	
7	Credit Car		100	
8	Food		300	
9	Gas		50	
10	Total			
11				

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 3) Entering date values in excel



The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The spreadsheet contains a table of monthly expenses. The first column is labeled "Bills" and the second column is labeled "Total". The table includes rows for Rent, Phone, Credit Car, Food, and Gas. The "Total" column shows the sum of each row. The cell B4 contains the date "Jan-16". The "Format Cells" dialog box is open, specifically the "Number" tab. The "Category" dropdown is set to "Custom". The "Type" dropdown is currently showing "mmm-yy\y". Other options listed include "#0.0E-0", "# ?/?", "# ??/??", "m/d/yyyy", "d-mmm-yy", "d-mmm", "mmm-yy", "h:mm AM/PM", "h:mm:ss AM/PM", "h:mm", and "h:mm:ss". A yellow circle highlights the "Type" dropdown and the "mmm-yy\y" option. Another yellow circle highlights the date value "1/1/2016" in the formula bar.

	Bills	Jan-16	Feb-16	Mar-16	Total
5	Rent	1200	1200	1200	3600
6	Phone	50	50	50	150
7	Credit Car	100	150	75	325
8	Food	300	350	225	875
9	Gas	50	40	80	170
10	Total				
11					

Format Cells

Number Alignment Font Border Fill

Category: General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom

Type: mmm-yy\y ##0.0E-0 # ?/? # ??/?? m/d/yyyy d-mmm-yy d-mmm mmm-yy h:mm AM/PM h:mm:ss AM/PM h:mm h:mm:ss

Sample: Jan-16

Type the number format code, using one of the existing codes as a starting point.

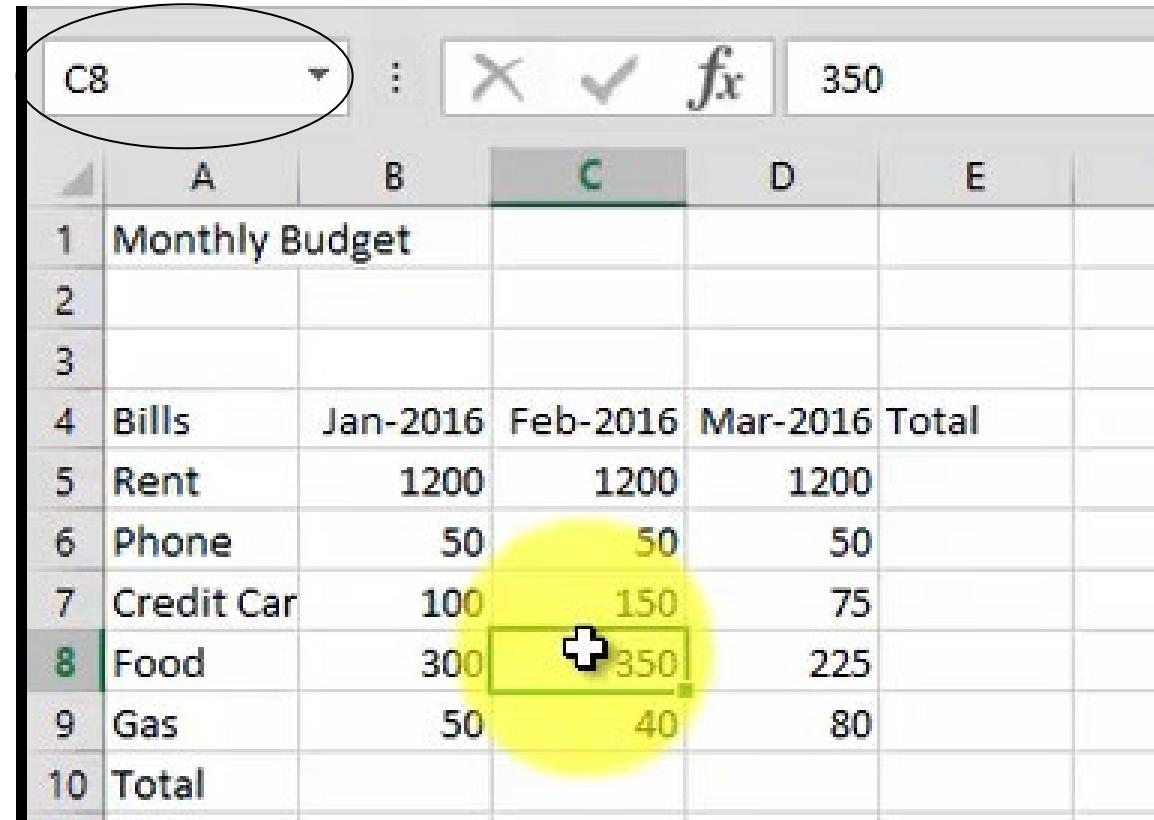
\*Copyright 2021 datatalks

OK Cancel

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 4) Working with cell references.

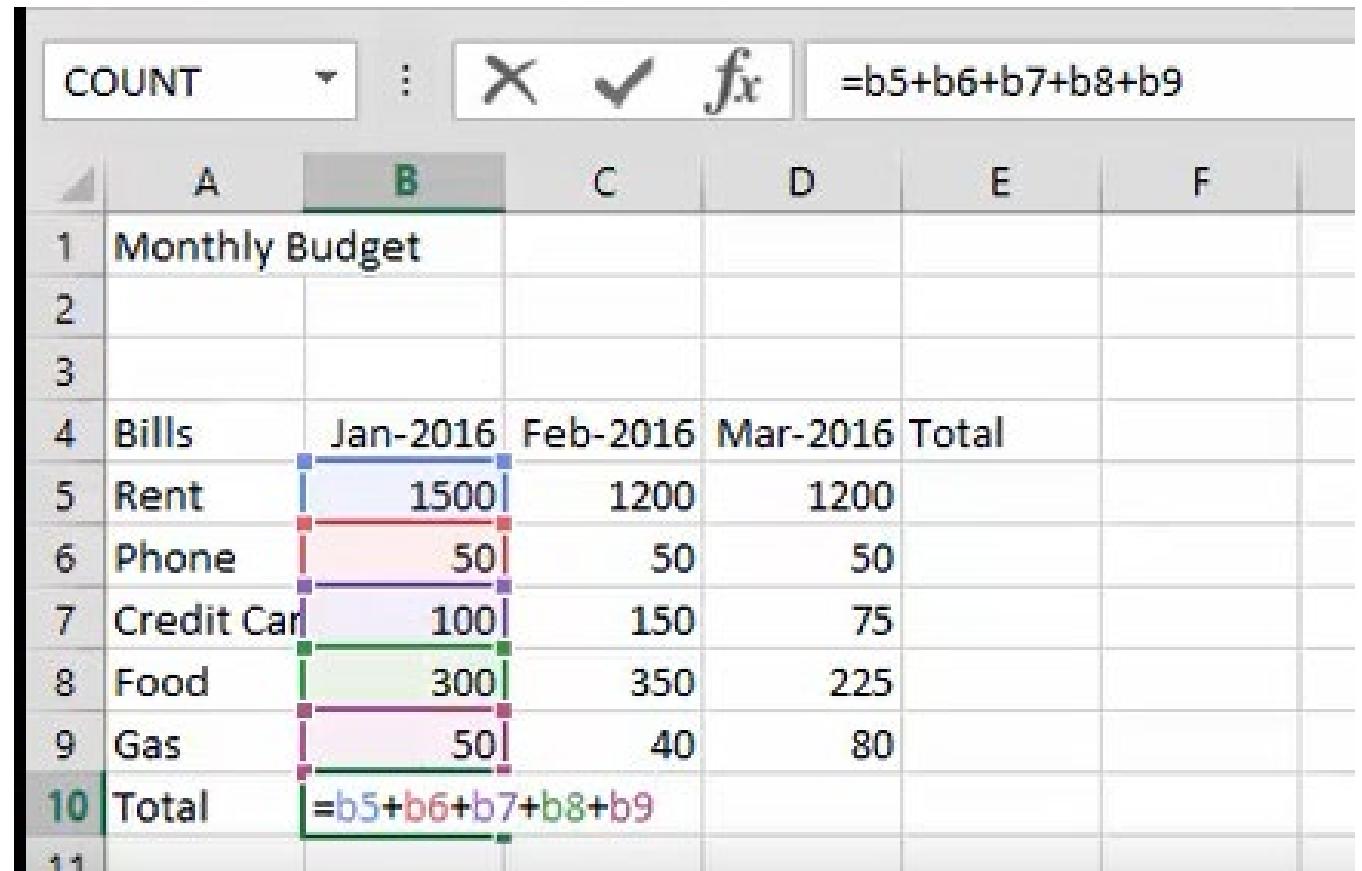


	A	B	C	D	E
1		Monthly Budget			
2					
3					
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total
5	Rent	1200	1200	1200	
6	Phone	50	50	50	
7	Credit Car	100	150	75	
8	Food	300	+350	225	
9	Gas	50	40	80	
10	Total				

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 5) Creating basic formulas in Excel



The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The formula bar at the top displays the formula `=b5+b6+b7+b8+b9`. The status bar at the bottom also shows the formula `=b5+b6+b7+b8+b9`. The spreadsheet contains data for bills across three months (Jan-2016, Feb-2016, Mar-2016) and a total row.

	A	B	C	D	E	F
1	Monthly Budget					
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	
5	Rent	1500		1200	1200	
6	Phone	50		50	50	
7	Credit Card	100		150	75	
8	Food	300		350	225	
9	Gas	50		40	80	
10	Total	=b5+b6+b7+b8+b9				
11						

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 6) Relative versus absolute cell reference in formulas.

	A	B	C	D	E	F
1	Monthly Budget					
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
5	Rent	1200	1200	1200	3600	=E5/\$E\$10
6	Phone	50	50	50	150	
7	Credit Car	100	150	75	325	
8	Food	300	350	225	875	
9	Gas	50	40	80	170	
10	Total	1700	1790	1630	5120	
11						

## Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 7) Understanding the order of operation.

### Order of Operations

<b>B</b>	<b>Brackets</b>	$10 \times (4 + 2) = 10 \times 6 = 60$
<b>O</b>	<b>Order</b>	$5 + 2^2 = 5 + 4 = 9$
<b>D</b>	<b>Division</b>	$10 + 6 \div 2 = 10 + 3 = 13$
<b>M</b>	<b>Multiplication</b>	$10 - 4 \times 2 = 10 - 8 = 2$
<b>A</b>	<b>Addition</b>	$10 \times 4 + 7 = 40 + 7 = 47$
<b>S</b>	<b>Subtraction</b>	$10 \div 2 - 3 = 5 - 3 = 2$

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 1) The Structure of an Excel function

### **STRUCTURE OF EXCEL FUNCTIONS**

=

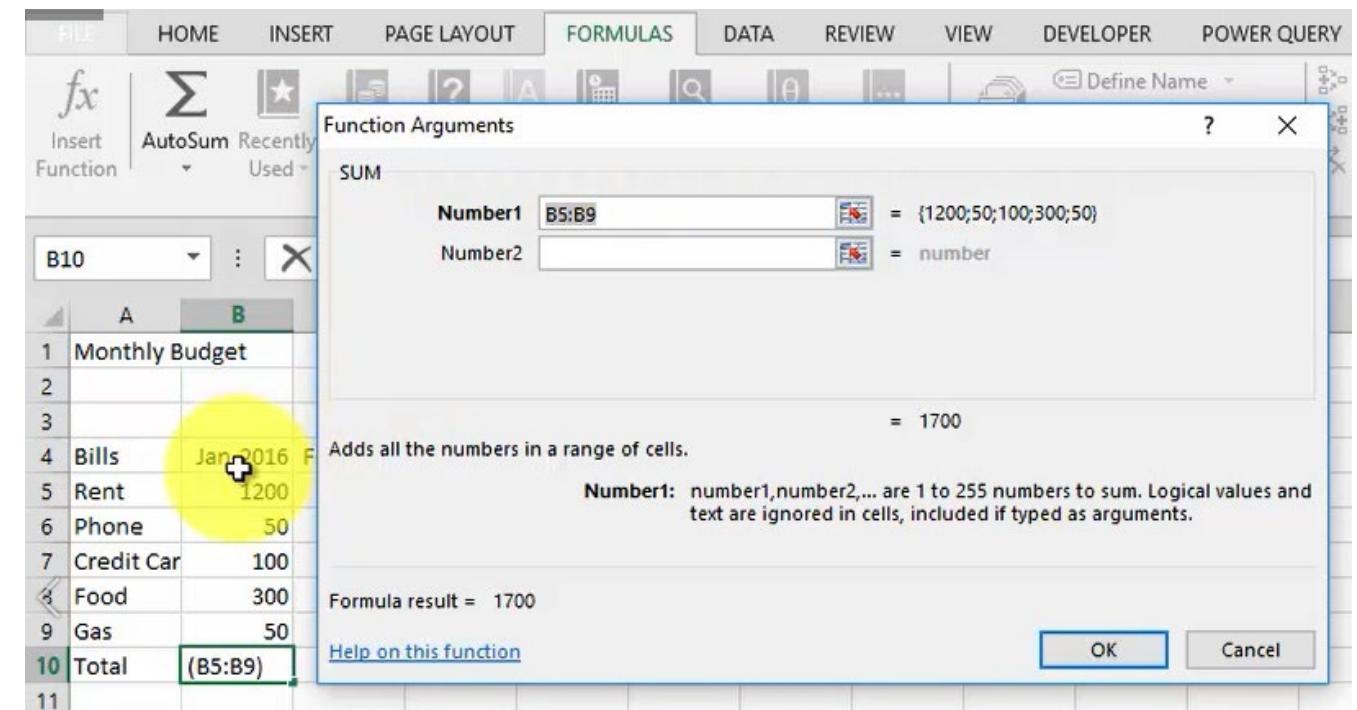
**FUNCTION NAME  
(ARGUMENTS)**

**=SUM(A5:A6)**

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates

## 2) Working with the sum function



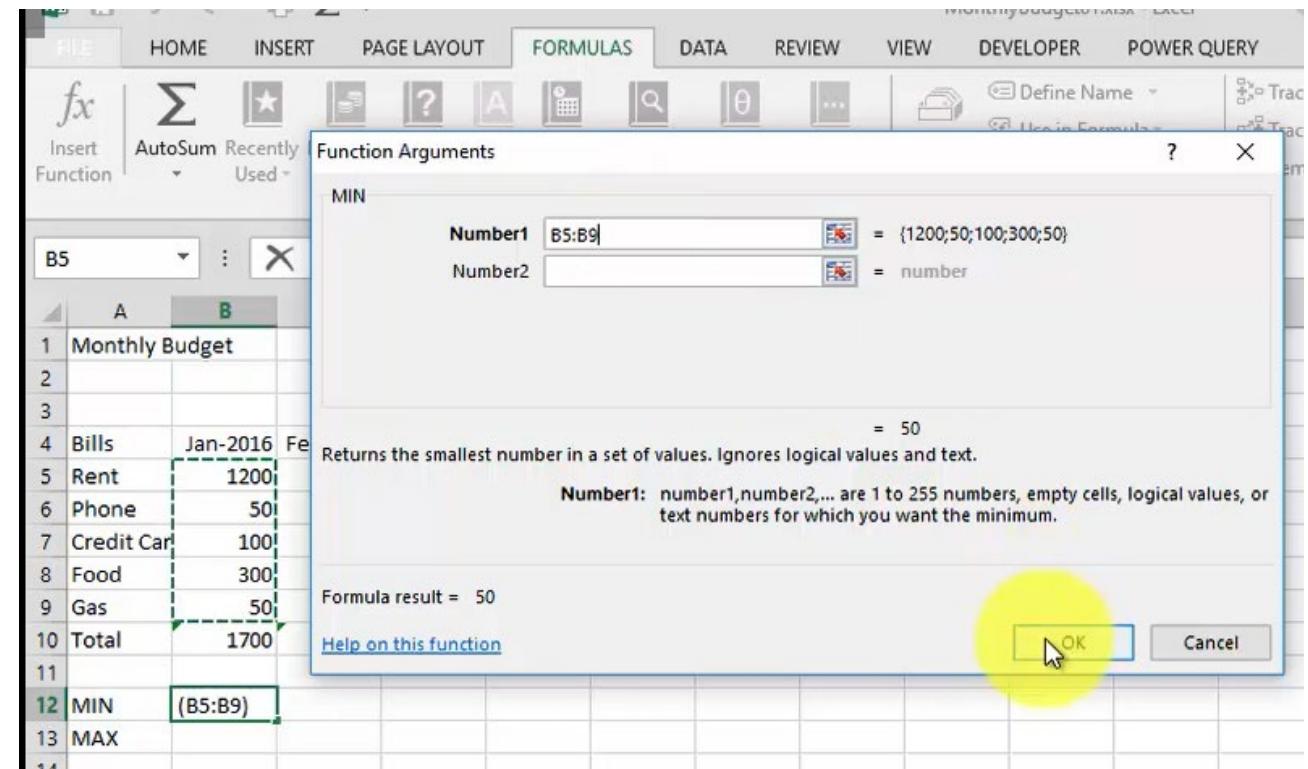
A screenshot of Microsoft Excel demonstrating the use of the SUM function. The ribbon is visible at the top with the FORMULAS tab selected. In the formula bar, the cell reference B10 is shown. The worksheet below is titled 'Monthly Budget' and contains a list of monthly expenses from Rent to Gas, with a total row at the bottom. The cell B5:B9 is highlighted with a yellow circle, indicating the range selected for the function argument. The 'Function Arguments' dialog box is open, showing the 'SUM' function with 'Number1' set to B5:B9 and 'Number2' left empty. The formula result is displayed as 1700. The dialog box also includes a description of the function and a help link.

Month	Category	Amount
1	Bills	Jan 2016
5	Rent	1200
6	Phone	50
7	Credit Card	100
8	Food	300
9	Gas	50
10	Total	(B5:B9)

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates

## 3) Working with the Min & Max functions



The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The spreadsheet contains the following data:

	A	B
1		Monthly Budget
2		
3		
4	Bills	Jan-2016
5	Rent	1200
6	Phone	50
7	Credit Card	100
8	Food	300
9	Gas	50
10	Total	1700
11		
12	MIN	(B5:B9)
13	MAX	
14		

The formula bar at the top shows =MIN(B5:B9). The "Formulas" tab is selected in the ribbon. A "Function Arguments" dialog box is open, showing "Number1" set to B5:B9 (with a tooltip showing values {1200;50;100;300;50}) and "Number2" set to empty. The formula result is displayed as 50. The dialog box includes a "Help on this function" link and "OK" and "Cancel" buttons. The "OK" button is highlighted with a yellow circle.

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates



## 4) Working with the average function

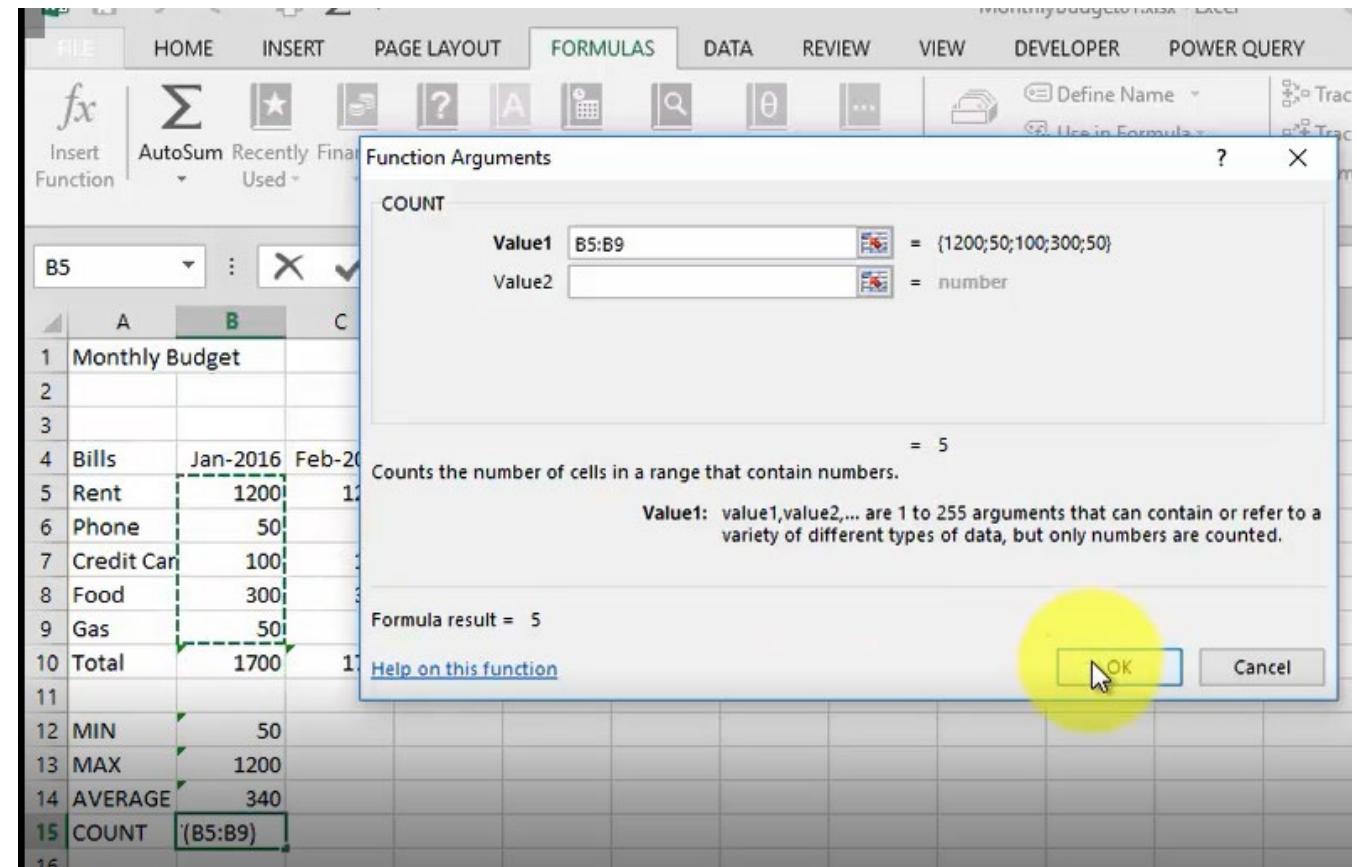
The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The spreadsheet contains data for bills like Rent, Phone, Credit Card, Food, and Gas, along with a Total row. The cell B14 contains the formula =AVERAGE(B5:B9). A yellow circle highlights the cell B14. The "FORMULAS" tab is selected in the ribbon, and the "Function Arguments" dialog box is open over the spreadsheet. The dialog box shows the AVERAGE function with "Number1" set to B5:B9 and "Number2" left empty. It also displays the formula result as 340 and a description of the AVERAGE function: "Returns the average (arithmetic mean) of its arguments, which can be numbers or names, arrays, or references that contain numbers." There is also a note about the Number1 argument: "Number1: number1,number2,... are 1 to 255 numeric arguments for which you want the average." Buttons for "OK" and "Cancel" are at the bottom right of the dialog box.

A	B		
1	Monthly Budget		
4	Bills	Jan-2016	Feb-
5	Rent	1200	
6	Phone	50	
7	Credit Card	100	
8	Food	300	
9	Gas	50	
10	Total	1700	
12	MIN	50	
13	MAX	1200	
14	AVERAGE	(B5:B9)	
15			

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

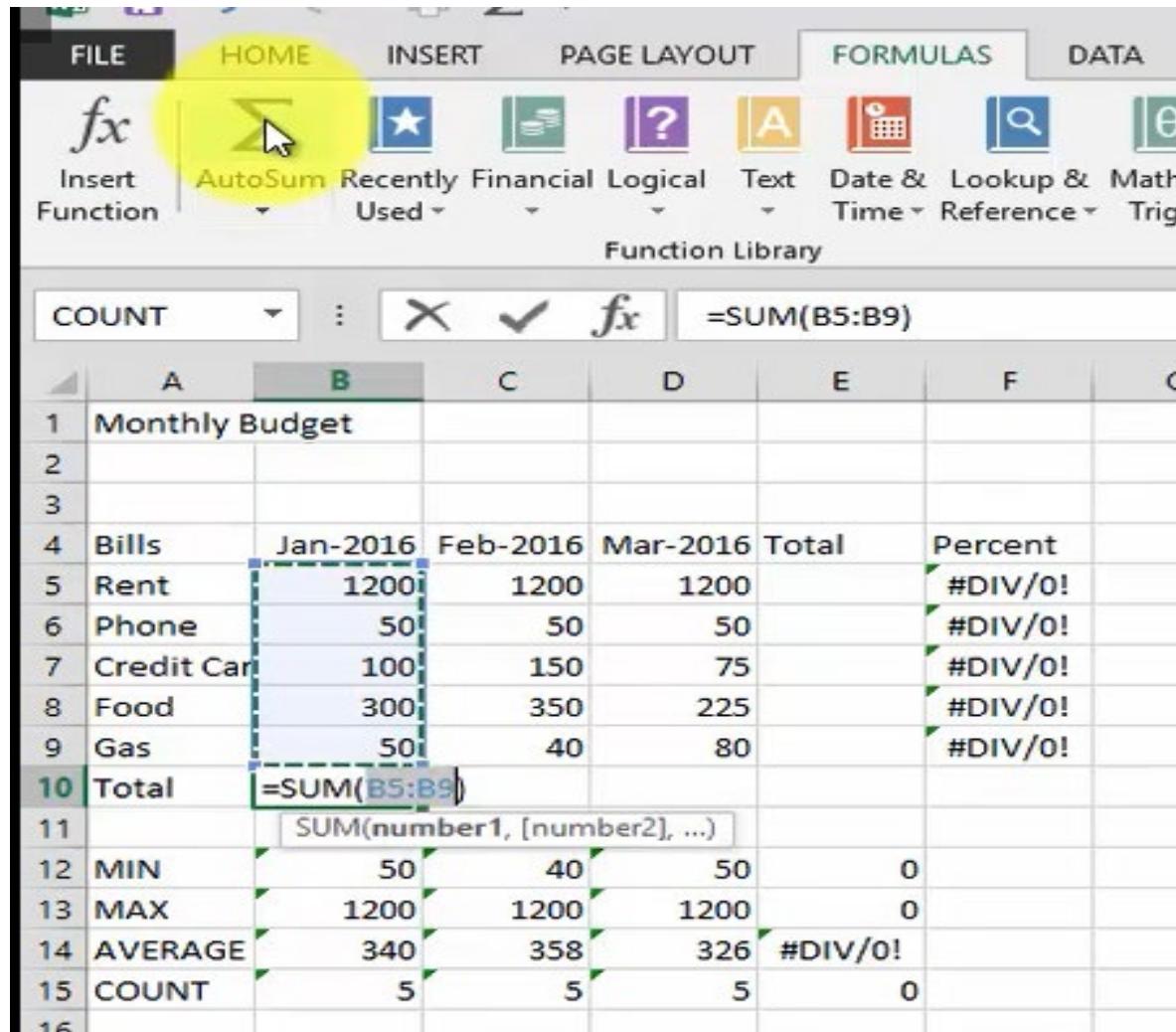
## 5) Working with the count function



# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 6) Using the autosum command

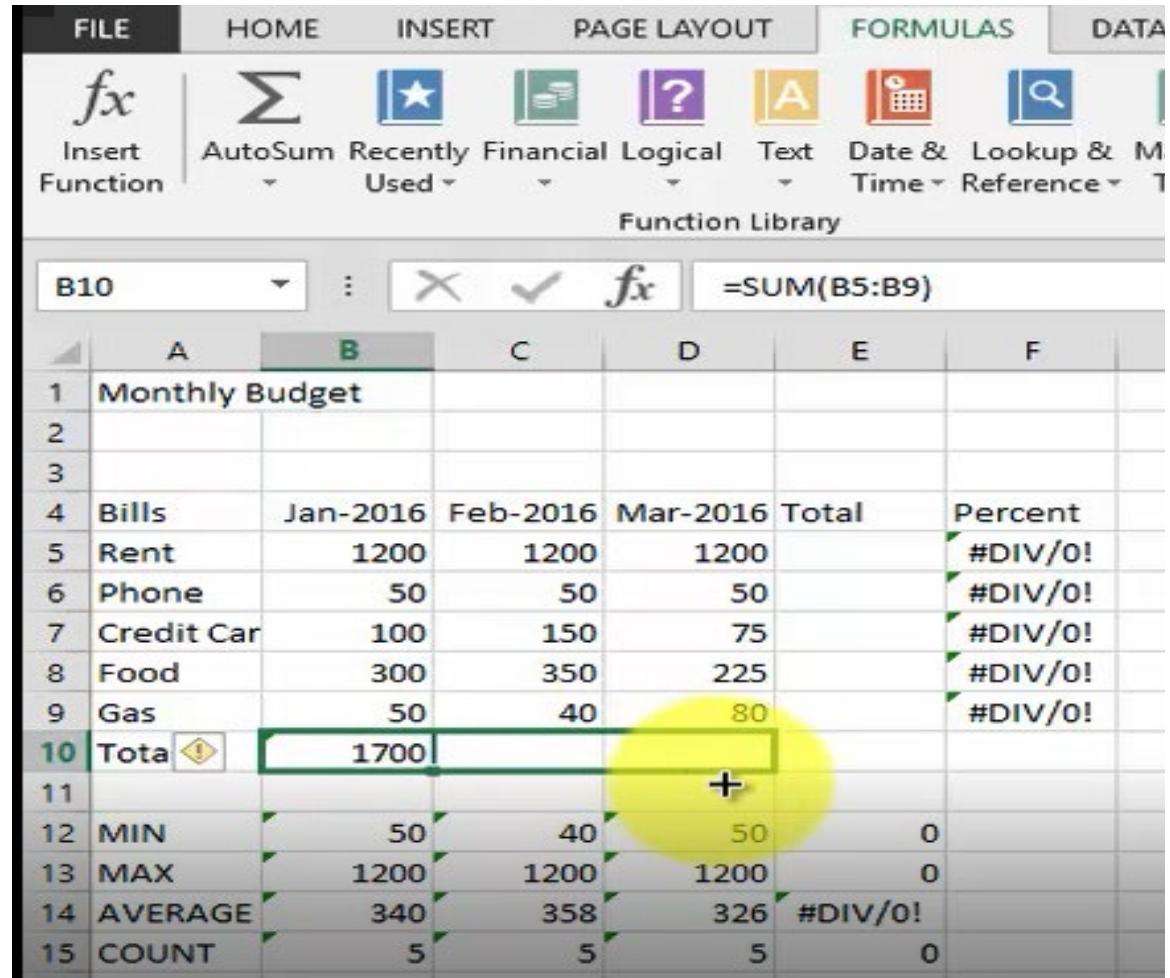


	A	B	C	D	E	F	G
1		Monthly Budget					
2							
3							
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent	
5	Rent	1200	1200	1200		#DIV/0!	
6	Phone	50	50	50		#DIV/0!	
7	Credit Car	100	150	75		#DIV/0!	
8	Food	300	350	225		#DIV/0!	
9	Gas	50	40	80		#DIV/0!	
10	Total	=SUM(B5:B9)					
11		SUM(number1, [number2], ...)					
12	MIN	50	40	50	0		
13	MAX	1200	1200	1200	0		
14	AVERAGE	340	358	326	#DIV/0!		
15	COUNT	5	5	5	0		
16							

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 7) Using the autofill command to copy formulas.

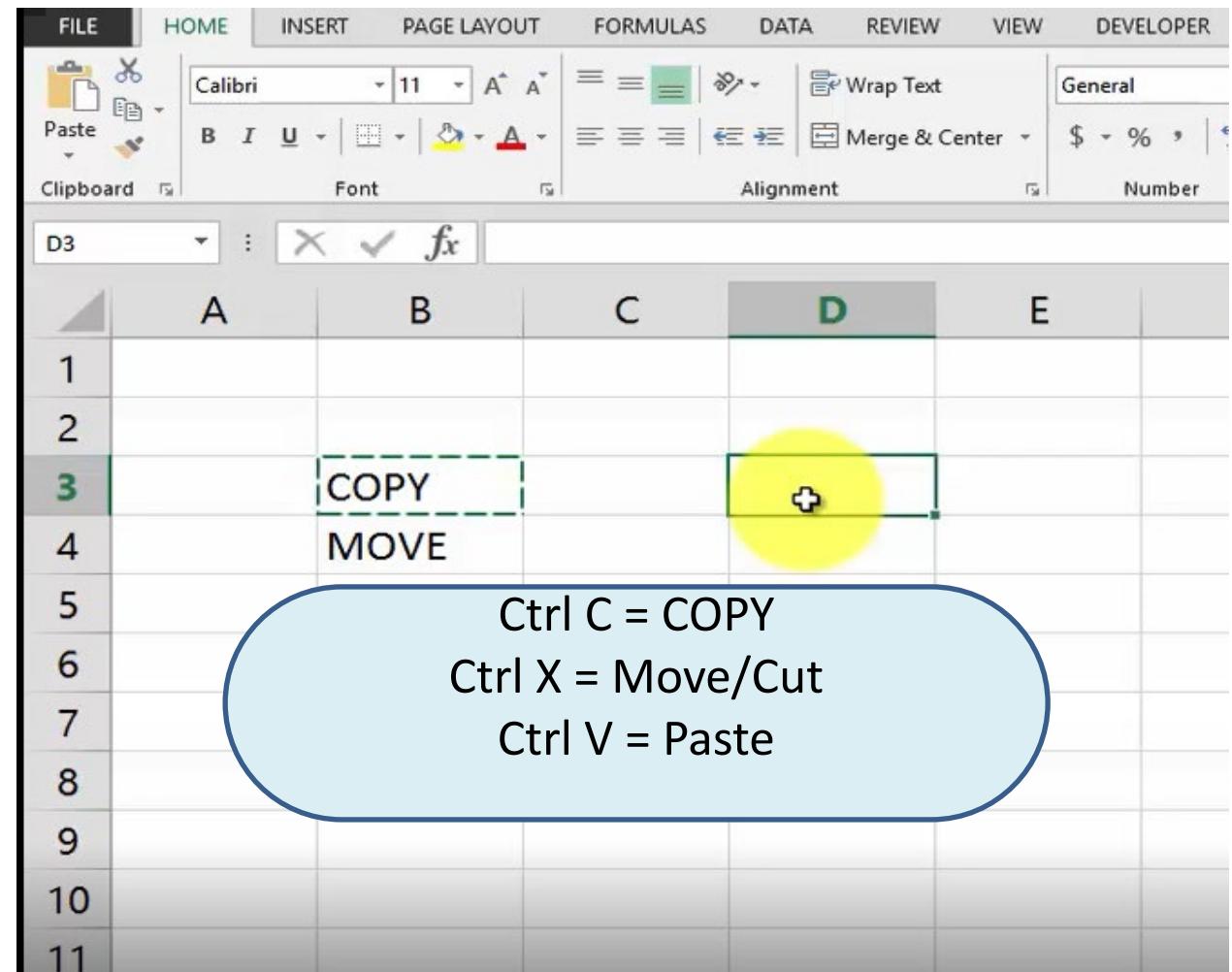


	A	B	C	D	E	F
1		Monthly Budget				
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
5	Rent	1200	1200	1200		#DIV/0!
6	Phone	50	50	50		#DIV/0!
7	Credit Car	100	150	75		#DIV/0!
8	Food	300	350	225		#DIV/0!
9	Gas	50	40	80		#DIV/0!
10	Total	1700				
11						
12	MIN	50	40	50	0	
13	MAX	1200	1200	1200	0	
14	AVERAGE	340	358	326	#DIV/0!	
15	COUNT	5	5	5	0	

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

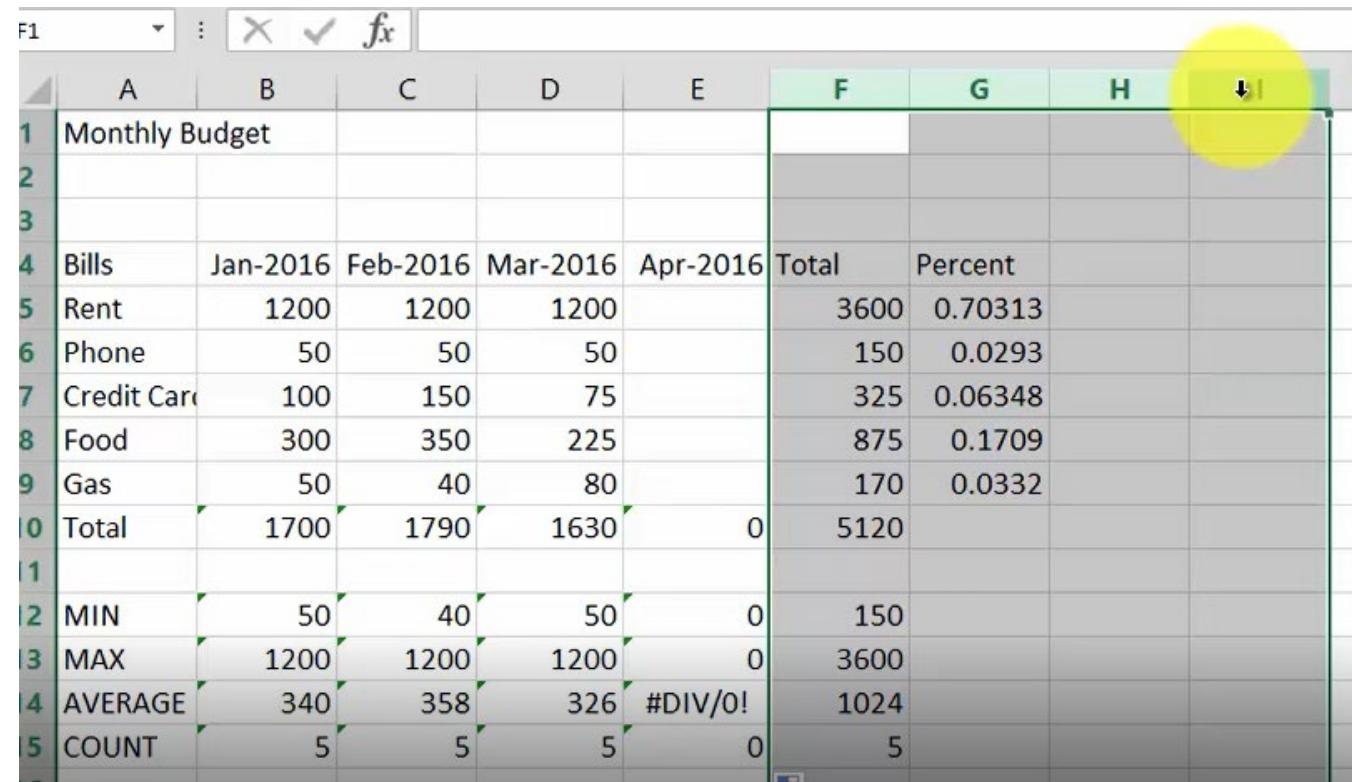
## 1) Moving and copying date in an excel worksheet



# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 2) Inserting and deleting rows and columns.



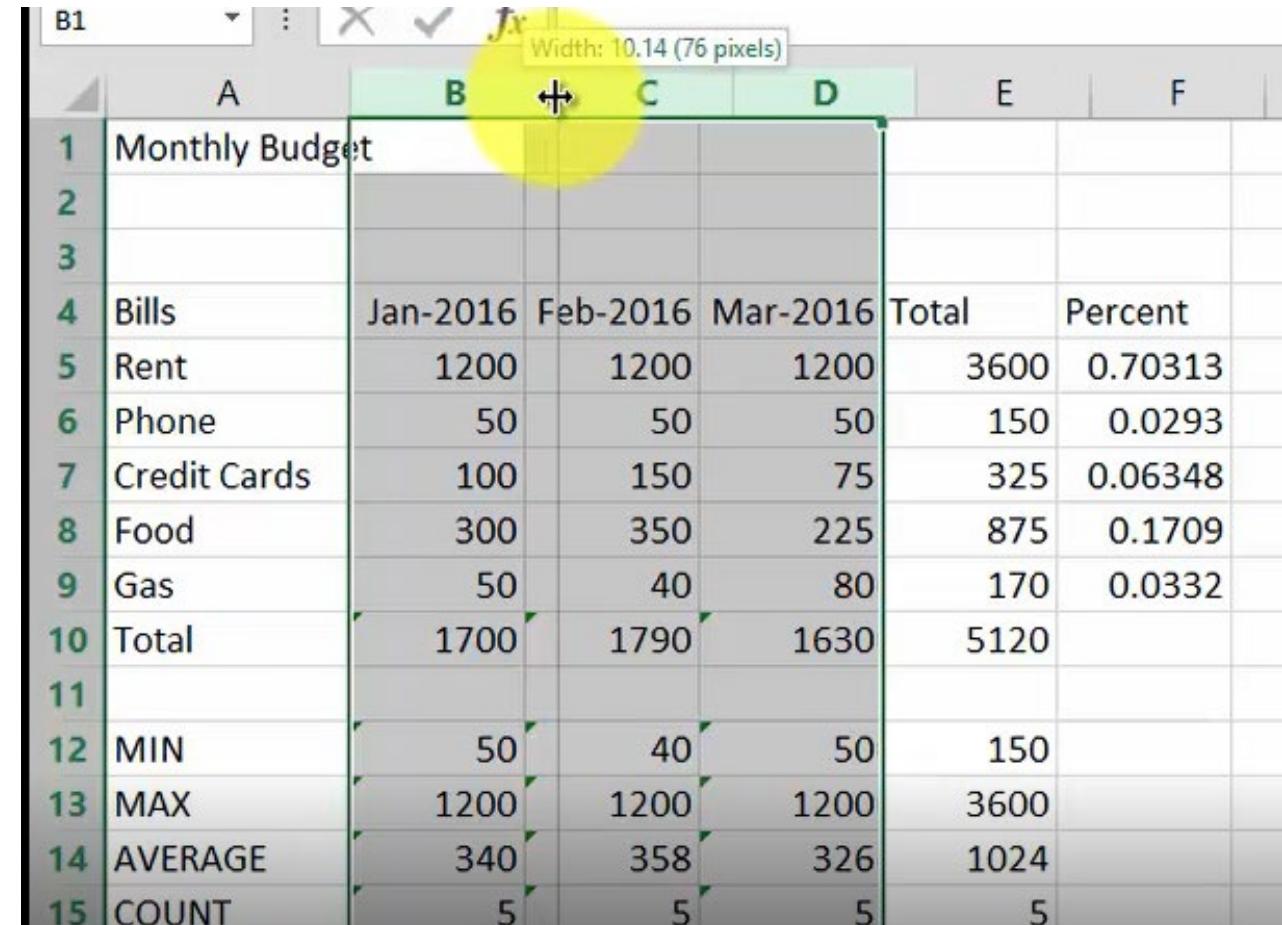
	A	B	C	D	E	F	G	H
1	Monthly Budget							
2								
4	Bills	Jan-2016	Feb-2016	Mar-2016	Apr-2016	Total	Percent	
5	Rent	1200	1200	1200		3600	0.70313	
6	Phone	50	50	50		150	0.0293	
7	Credit Card	100	150	75		325	0.06348	
8	Food	300	350	225		875	0.1709	
9	Gas	50	40	80		170	0.0332	
10	Total	1700	1790	1630	0	5120		
11								
12	MIN	50	40	50	0	150		
13	MAX	1200	1200	1200	0	3600		
14	AVERAGE	340	358	326	#DIV/0!	1024		
15	COUNT	5	5	5	0	5		

Ctrl Shift + = Adding Column/Row  
Ctrl - = Deleting Column/Rows

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 3) Changing the width and height of cells.

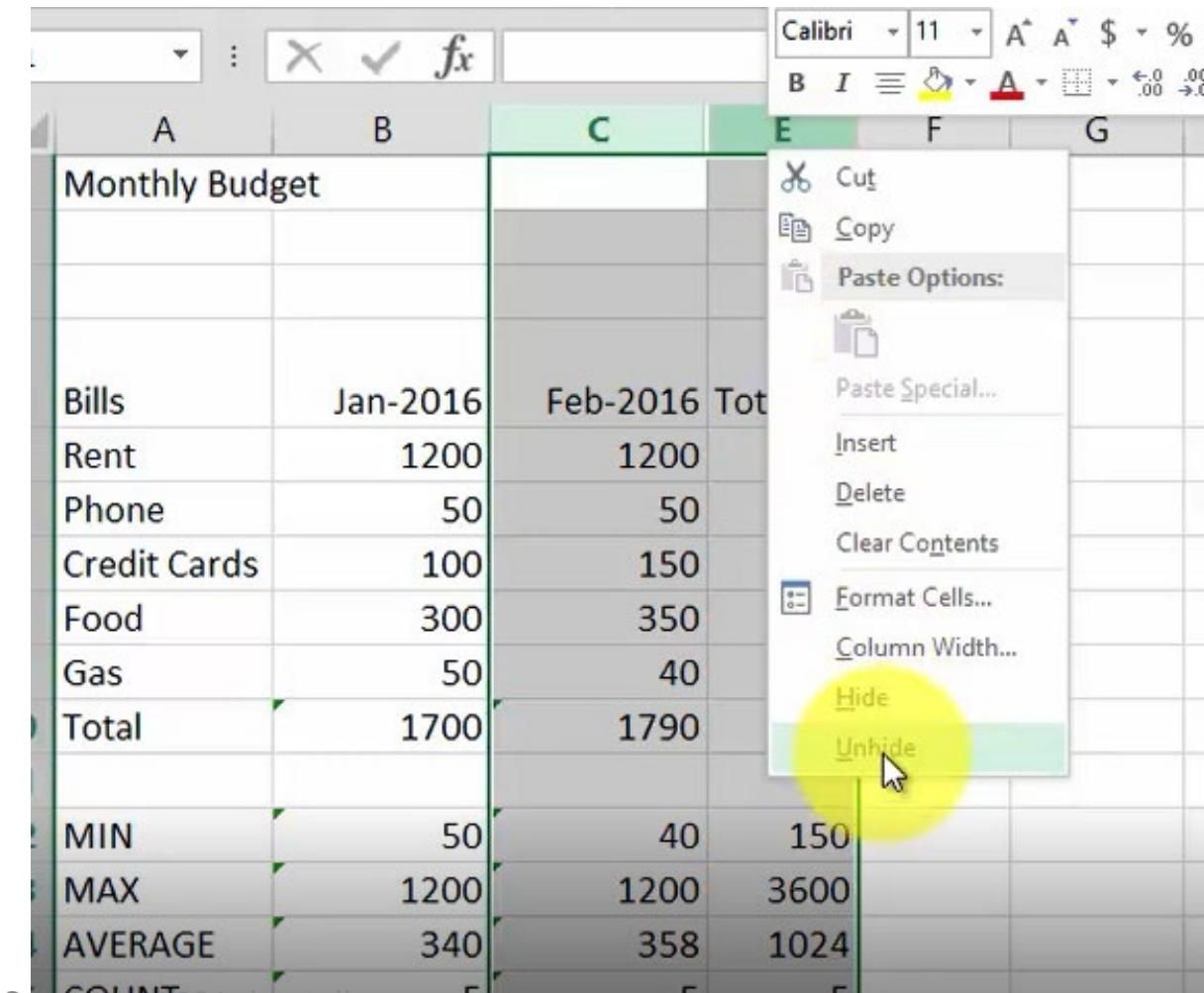


	A	B	C	D	E	F
1	Monthly Budget					
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
5	Rent	1200	1200	1200	3600	0.70313
6	Phone	50	50	50	150	0.0293
7	Credit Cards	100	150	75	325	0.06348
8	Food	300	350	225	875	0.1709
9	Gas	50	40	80	170	0.0332
10	Total	1700	1790	1630	5120	
11						
12	MIN	50	40	50	150	
13	MAX	1200	1200	1200	3600	
14	AVERAGE	340	358	326	1024	
15	COUNT	5	5	5	5	

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 4) Hiding and unhiding excel rows and columns.



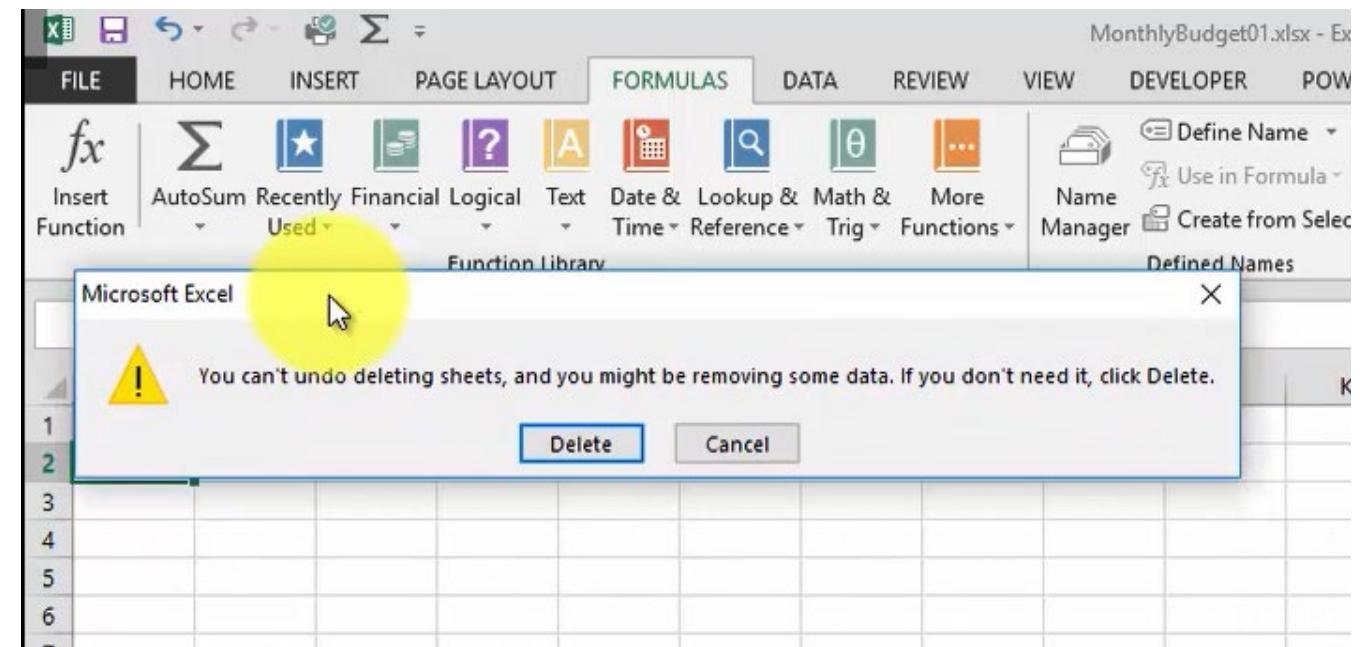
The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The data includes columns for Bills, Jan-2016, Feb-2016, and Total. The "Total" column is currently selected. A context menu is open over the "Total" column header, specifically over the "C" column label. The menu options include: Cut, Copy, Paste Options:, Paste Special..., Insert, Delete, Clear Contents, Format Cells..., Column Width..., Hide, and Unhide. The "Hide" option is highlighted with a yellow circle and a cursor is hovering over it. The "Unhide" option is also visible at the bottom of the menu.

Bills	Jan-2016	Feb-2016	Total
Rent	1200	1200	
Phone	50	50	
Credit Cards	100	150	
Food	300	350	
Gas	50	40	
<b>Total</b>	<b>1700</b>	<b>1790</b>	
MIN	50	40	150
MAX	1200	1200	3600
AVERAGE	340	358	1024
SUM	5	5	5

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

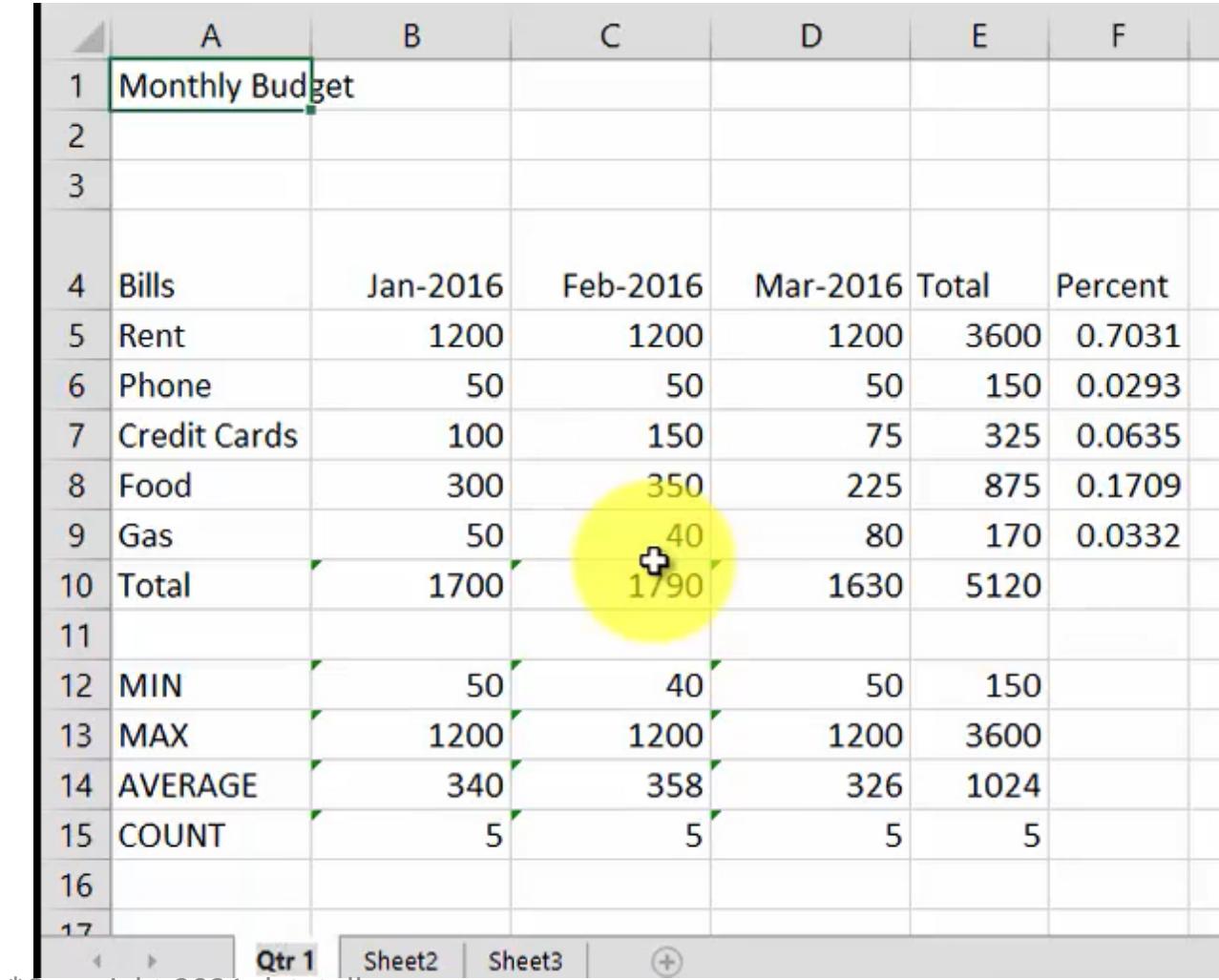
## 5) Deleting and excel worksheet.



# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 6) Renaming an excel worksheet.

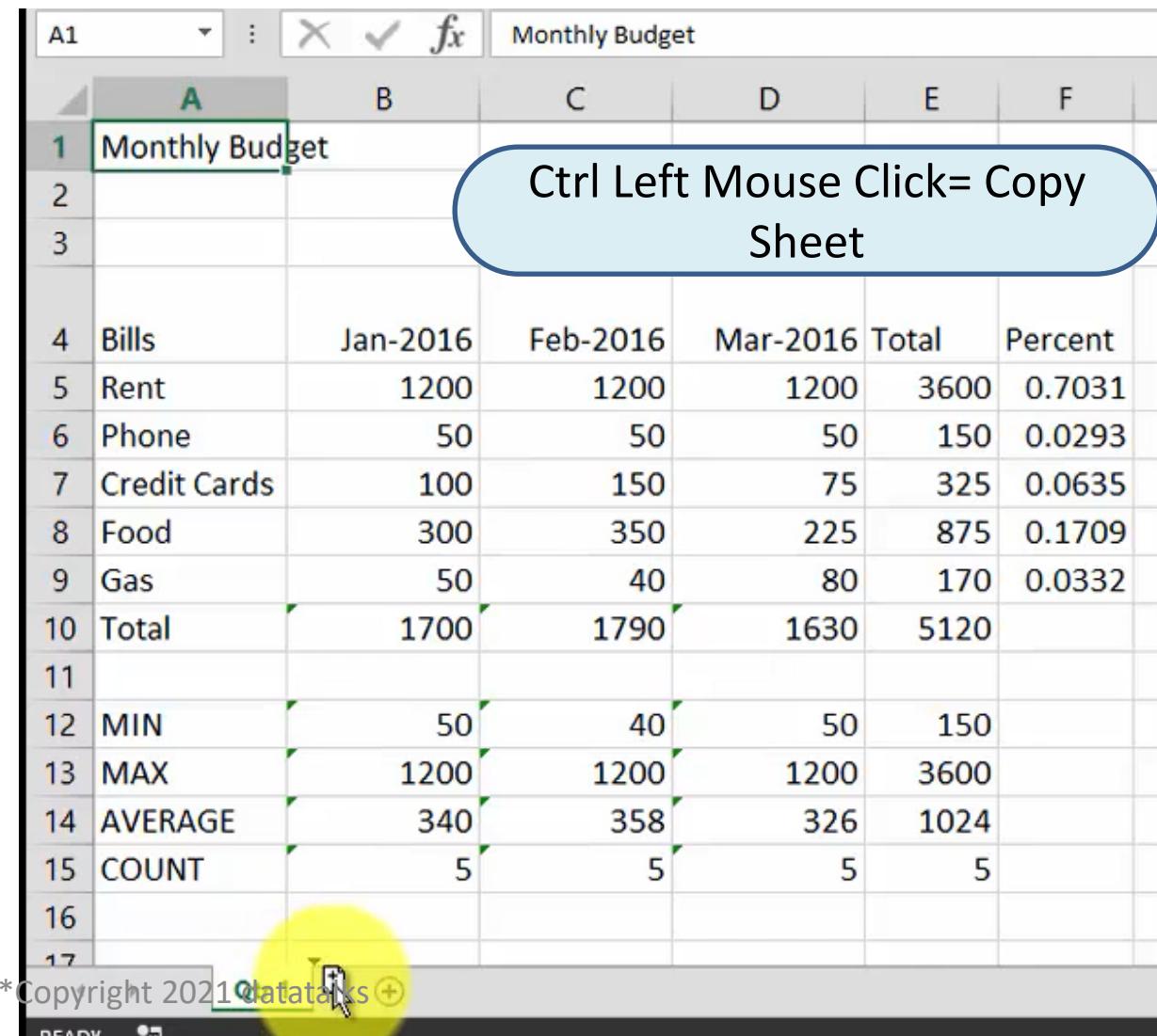
A screenshot of a Microsoft Excel spreadsheet titled "Monthly Budget". The spreadsheet contains data for three months: Jan-2016, Feb-2016, and Mar-2016. It includes categories like Rent, Phone, Credit Cards, Food, and Gas, along with summary rows for Total and various statistical functions (MIN, MAX, AVERAGE, COUNT). The cell containing "Monthly Budget" in row 1, column A is highlighted with a green border. A yellow circle with a plus sign is overlaid on the cell at row 10, column C, which contains the value "1790".

	A	B	C	D	E	F
1	Monthly Budget					
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
5	Rent	1200	1200	1200	3600	0.7031
6	Phone	50	50	50	150	0.0293
7	Credit Cards	100	150	75	325	0.0635
8	Food	300	350	225	875	0.1709
9	Gas	50	40	80	170	0.0332
10	Total	1700	1790	1630	5120	
11						
12	MIN	50	40	50	150	
13	MAX	1200	1200	1200	3600	
14	AVERAGE	340	358	326	1024	
15	COUNT	5	5	5	5	
16						
17						

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 7) Moving and copying a excel worksheet.



	A1	B	C	D	E	F
1	Monthly Budget					
2						
3						
4	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
5	Rent	1200	1200	1200	3600	0.7031
6	Phone	50	50	50	150	0.0293
7	Credit Cards	100	150	75	325	0.0635
8	Food	300	350	225	875	0.1709
9	Gas	50	40	80	170	0.0332
10	Total	1700	1790	1630	5120	
11						
12	MIN	50	40	50	150	
13	MAX	1200	1200	1200	3600	
14	AVERAGE	340	358	326	1024	
15	COUNT	5	5	5	5	
16						
17						

\*Copyright 2021 datatalks

## Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

### 8) Formatting data in an excel worksheet

1. Working with font formatting commands.
2. Changing the background color of cell.
3. Adding borders to cells.
4. Formatting data as currency values.
5. Formatting percentages.
6. Using excel format painter.
7. Creating styles to format data
8. Merging and centering cells

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

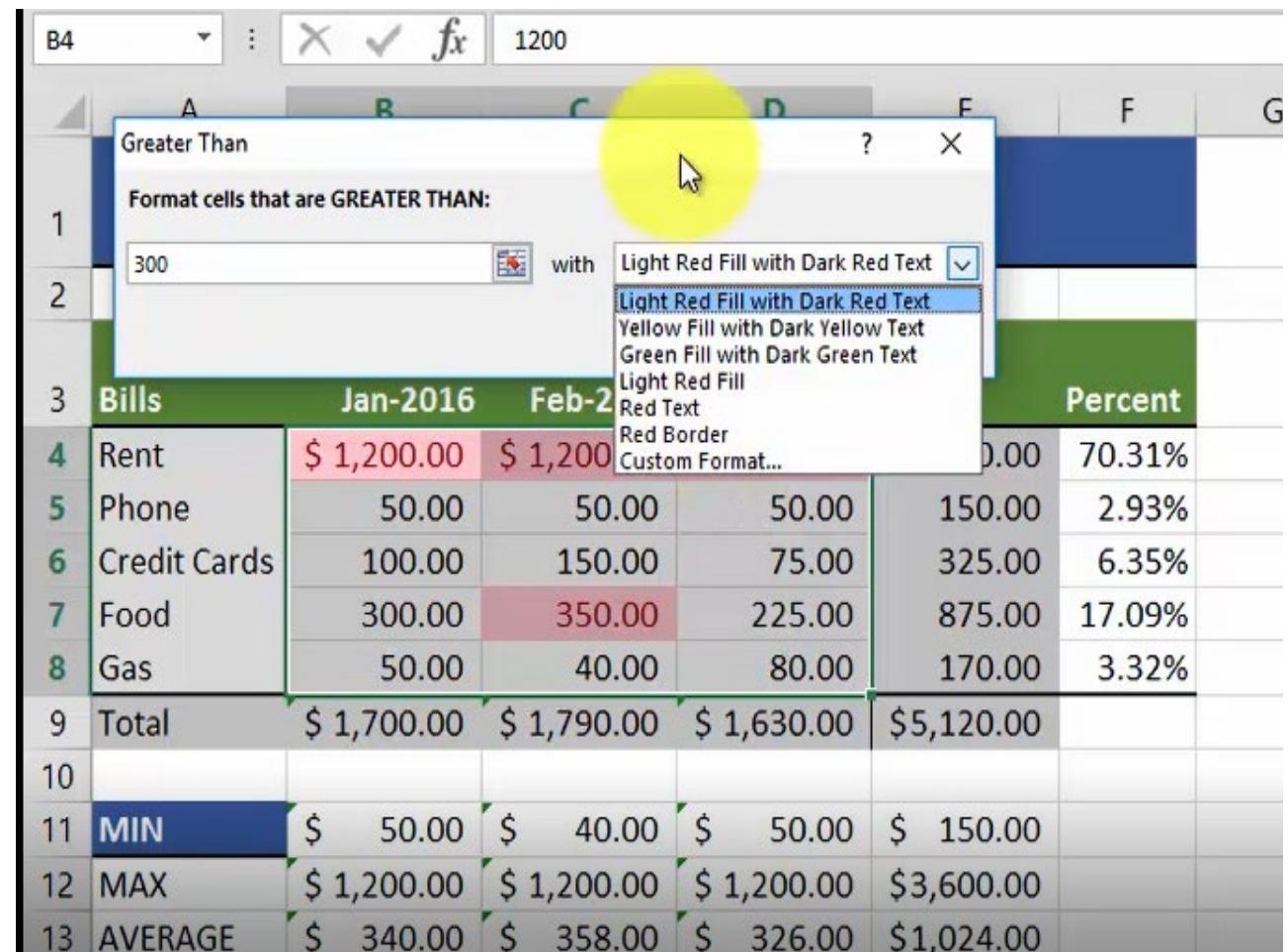
## Design Sample

	A	B	C	D	E	F
1	Monthly Budget					
2						
3	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
4	Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	70.31%
5	Phone	50.00	50.00	50.00	150.00	2.93%
6	Credit Cards	100.00	150.00	75.00	325.00	6.35%
7	Food	300.00	350.00	225.00	875.00	17.09%
8	Gas	50.00	40.00	80.00	170.00	3.32%
9	Total	\$ 1,700.00	\$ 1,790.00	\$ 1,630.00	\$5,120.00	
10						
11	MIN	\$ 50.00	\$ 40.00	\$ 50.00	\$ 150.00	
12	MAX	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	
13	AVERAGE	\$ 340.00	\$ 358.00	\$ 326.00	\$1,024.00	

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 9) Using Conditional formatting



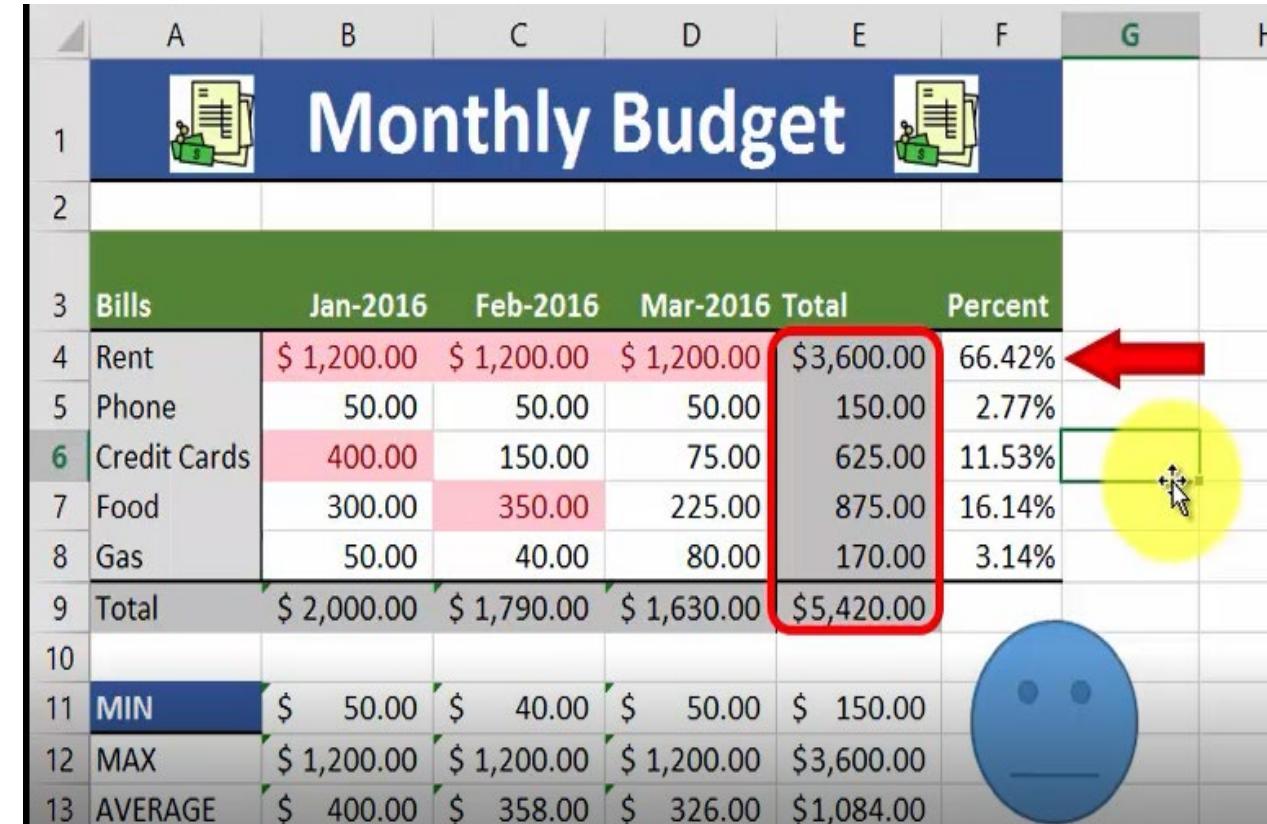
The screenshot shows a Microsoft Excel spreadsheet titled "Bills" with columns for Jan-2016 and Feb-2016. Row 11 contains summary values: MIN (\$50.00), MAX (\$1,200.00), and AVERAGE (\$340.00). Row 12 contains the formula =MAX(\$B\$4:\$B\$8) for the MAX value. Row 13 contains the formula =AVERAGE(\$B\$4:\$B\$8) for the AVERAGE value.

	Bills	Jan-2016	Feb-2016		Percent
4	Rent	\$ 1,200.00	\$ 1,200	0.00	70.31%
5	Phone	50.00	50.00	150.00	2.93%
6	Credit Cards	100.00	150.00	325.00	6.35%
7	Food	300.00	350.00	875.00	17.09%
8	Gas	50.00	40.00	170.00	3.32%
9	Total	\$ 1,700.00	\$ 1,790.00	\$ 1,630.00	\$ 5,120.00
10					
11	MIN	\$ 50.00	\$ 40.00	\$ 50.00	\$ 150.00
12	MAX	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 3,600.00
13	AVERAGE	\$ 340.00	\$ 358.00	\$ 326.00	\$ 1,024.00

## Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. **Modifying A Worksheet**
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 10) Inserting images/Inserting Excel Shapes/Formatting excel shapes.

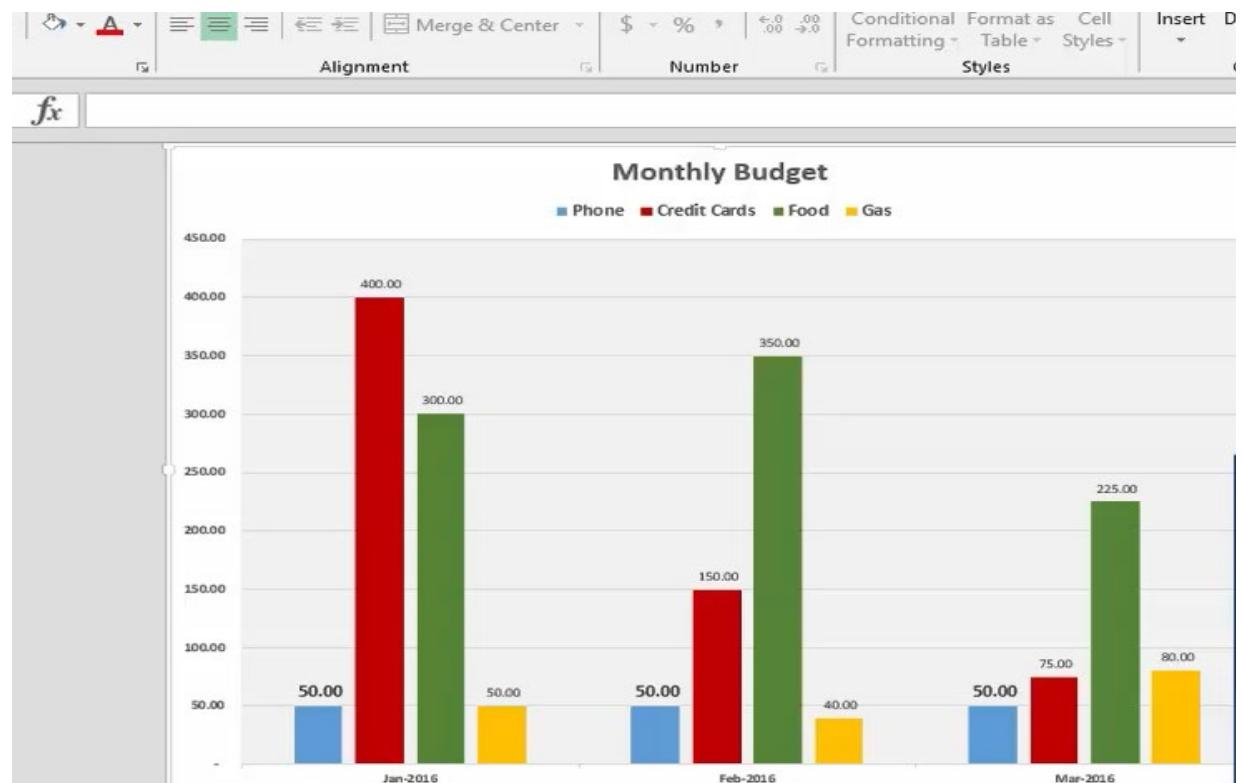


Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	66.42%
Phone	50.00	50.00	50.00	150.00	2.77%
Credit Cards	400.00	150.00	75.00	625.00	11.53%
Food	300.00	350.00	225.00	875.00	16.14%
Gas	50.00	40.00	80.00	170.00	3.14%
Total	\$ 2,000.00	\$ 1,790.00	\$ 1,630.00	\$5,420.00	
MIN	\$ 50.00	\$ 40.00	\$ 50.00	\$ 150.00	
MAX	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	
AVERAGE	\$ 400.00	\$ 358.00	\$ 326.00	\$1,084.00	

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

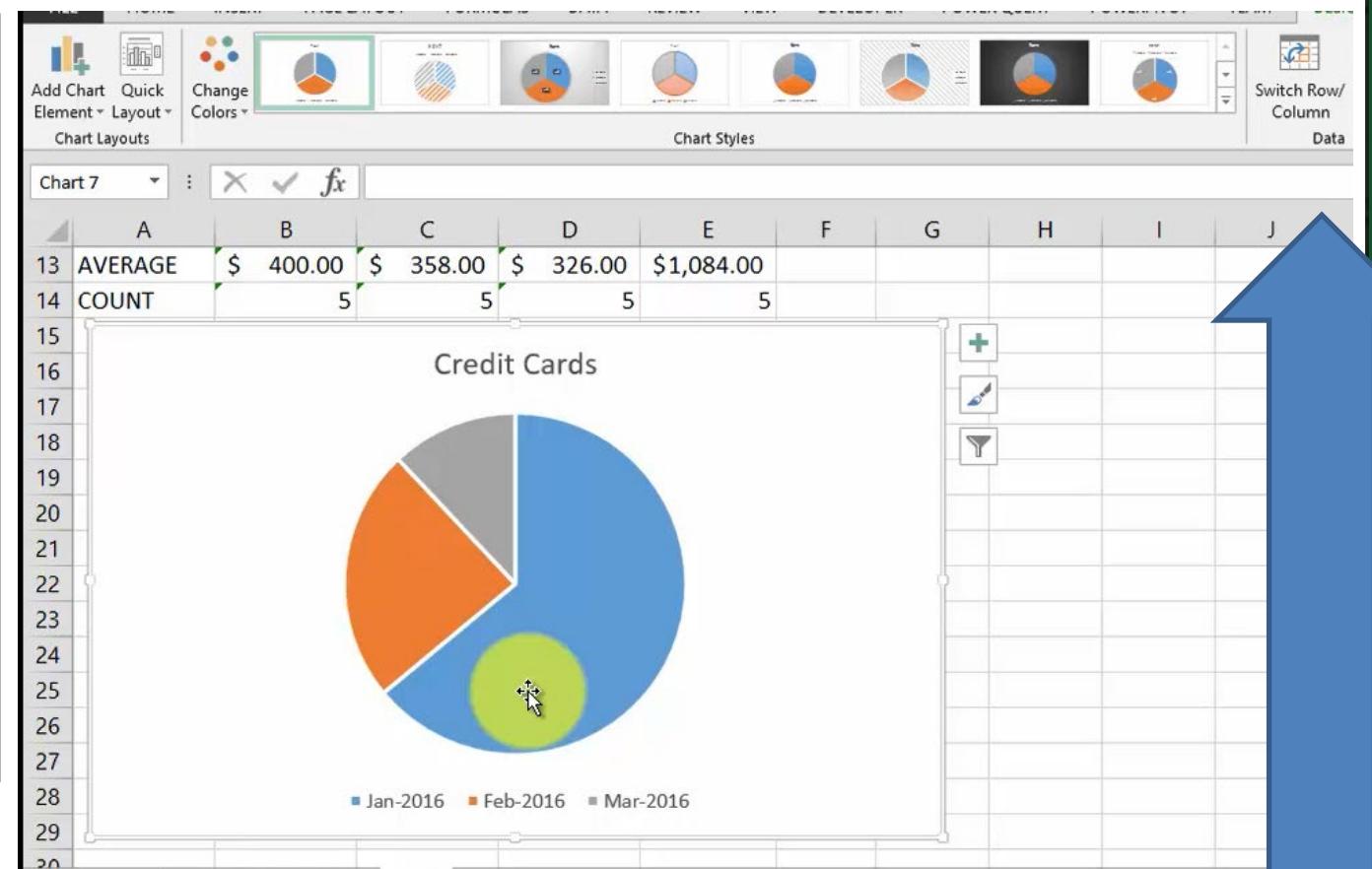
1) Creating an excel columns chart/Working with Excel Chart/Adding and Modifying/Formatting Chart/Moving Chart.



# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

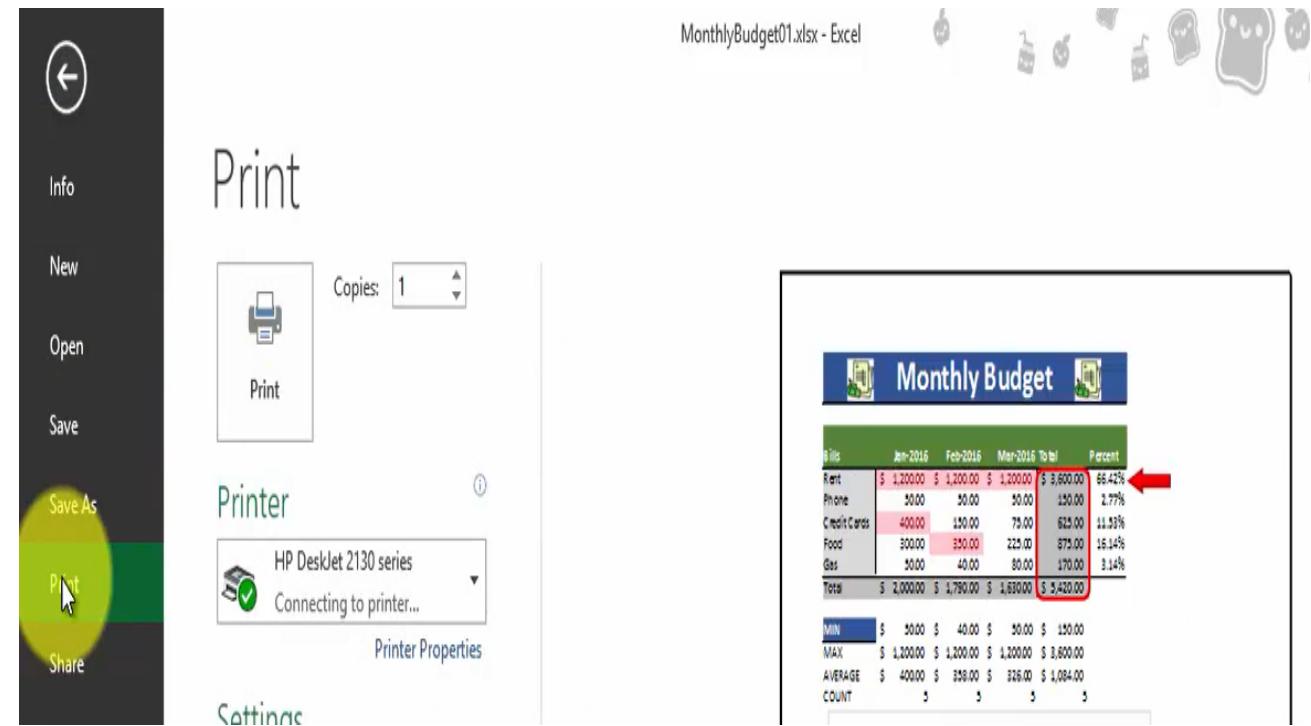
## 2) Working with excel pie chart



# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 1) Viewing your document in print preview.



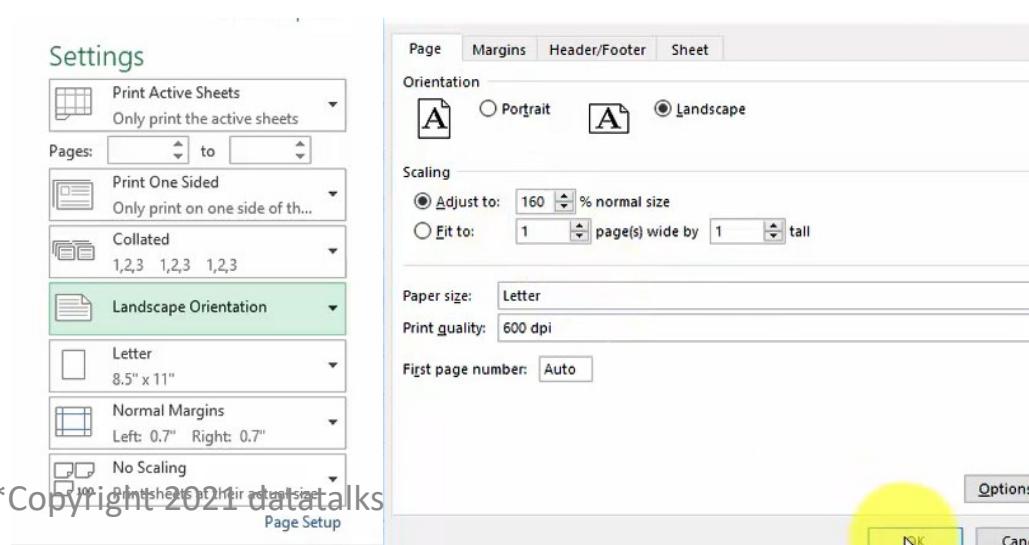
# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 2) Changing the margins scaling and orientation

Monthly Budget						
Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent	
Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 3,600.00	66.42%	
Phone	50.00	50.00	50.00	150.00	2.77%	
Credit Cards	400.00	150.00	75.00	625.00	11.53%	
Food	300.00	350.00	225.00	875.00	16.14%	
Gas	50.00	40.00	80.00	170.00	3.14%	
<b>Total</b>	<b>\$ 2,000.00</b>	<b>\$ 1,790.00</b>	<b>\$ 1,630.00</b>	<b>\$ 5,420.00</b>		

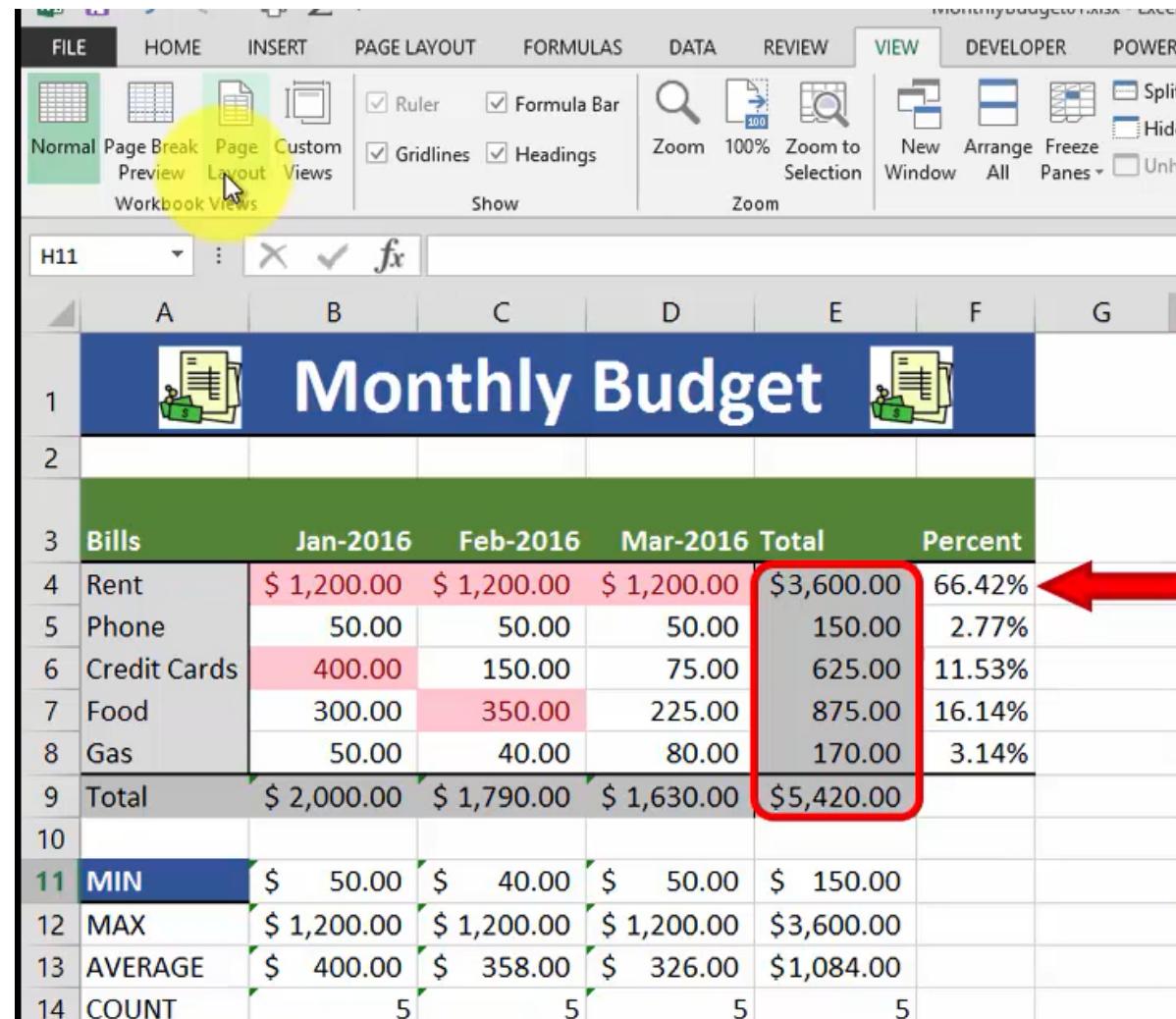
Monthly Budget



# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. **Printing Worksheet**
7. Working with Templates

## 3) Working with page layout view.



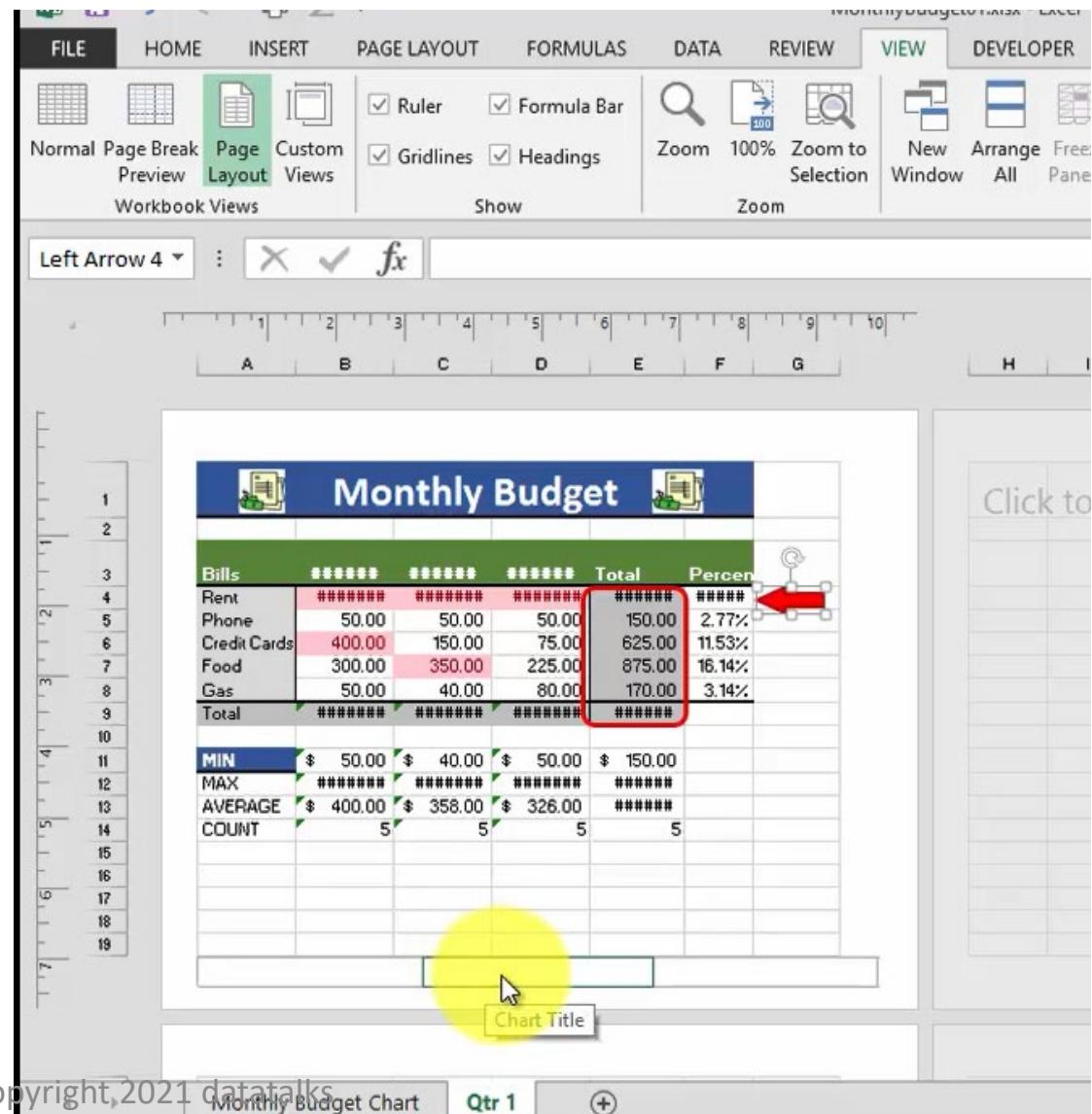
The screenshot shows a Microsoft Excel spreadsheet titled "Monthly Budget". The ribbon is visible at the top, with the "VIEW" tab selected. In the "Workbook Views" group, the "Layout" icon is highlighted with a yellow circle. The spreadsheet contains a table of monthly bills with columns for Jan-2016, Feb-2016, Mar-2016, Total, and Percent. Row 11 is selected, showing MIN values for each column. A red arrow points to the bottom-right corner of the "Total" row, which displays the formula =SUM(B4:D4).

	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
4	Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	66.42%
5	Phone	50.00	50.00	50.00	150.00	2.77%
6	Credit Cards	400.00	150.00	75.00	625.00	11.53%
7	Food	300.00	350.00	225.00	875.00	16.14%
8	Gas	50.00	40.00	80.00	170.00	3.14%
9	Total	\$ 2,000.00	\$ 1,790.00	\$ 1,630.00	\$5,420.00	
11	MIN	\$ 50.00	\$ 40.00	\$ 50.00	\$ 150.00	
12	MAX	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	
13	AVERAGE	\$ 400.00	\$ 358.00	\$ 326.00	\$1,084.00	
14	COUNT	5	5	5	5	

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates

## 4) Adding header and footer content



The screenshot shows a Microsoft Excel window titled "Monthly Budget.xlsx". The ribbon is visible at the top with the "Page Layout" tab selected. In the center, there is a "Monthly Budget" worksheet containing a table of expenses. The table has columns for Bills (Rent, Phone, Credit Cards, Food, Gas), Total amounts (150.00, 625.00, 875.00, 170.00), and Percentages (2.77%, 11.53%, 16.14%, 3.14%). Below the table, there are summary rows for MIN, MAX, AVERAGE, and COUNT. At the bottom of the worksheet, there is a footer section with a "Chart Title" placeholder. A red arrow points to the "Header & Footer" button in the ribbon, and a yellow circle highlights the "Chart Title" placeholder.

Bills				Total	Percent
Rent	50.00	50.00	50.00	150.00	2.77%
Phone	400.00	150.00	75.00	625.00	11.53%
Credit Cards	300.00	350.00	225.00	875.00	16.14%
Food	50.00	40.00	80.00	170.00	3.14%
Gas					
Total	####	####	####	####	####
MIN	\$ 50.00	\$ 40.00	\$ 50.00	\$ 150.00	
MAX	400.00	350.00	326.00	875.00	
AVERAGE	400.00	358.00	326.00	875.00	
COUNT	5	5	5	5	

\*Copyright, 2021 dataTalks

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates



## 5) Printing a specific range of cells

The screenshot shows the Microsoft Excel ribbon with the 'PAGE LAYOUT' tab selected. In the 'Print' section of the ribbon, the 'Print Area' button is highlighted with a yellow circle and a cursor. A dropdown menu is open, showing 'Print Area' and 'Clear Print Area'. Below the ribbon, a monthly budget worksheet titled 'Monthly Budget' is displayed. The data starts at row 3, column A, with a header row. Row 3 has columns for 'Bills' and months 'Jan-2016', 'Feb-2016', 'Mar-2016', 'Total', and 'Percent'. Rows 4 through 9 list expenses: Rent, Phone, Credit Cards, Food, and Gas, each with three month values and a total. A red arrow points from the 'Print Area' button in the ribbon to the 'Total' column in row 9, indicating that this specific range is being targeted for printing. The bottom of the screen shows the status bar with 'Copyright 2021 datatalks' and 'Qtr 1'.

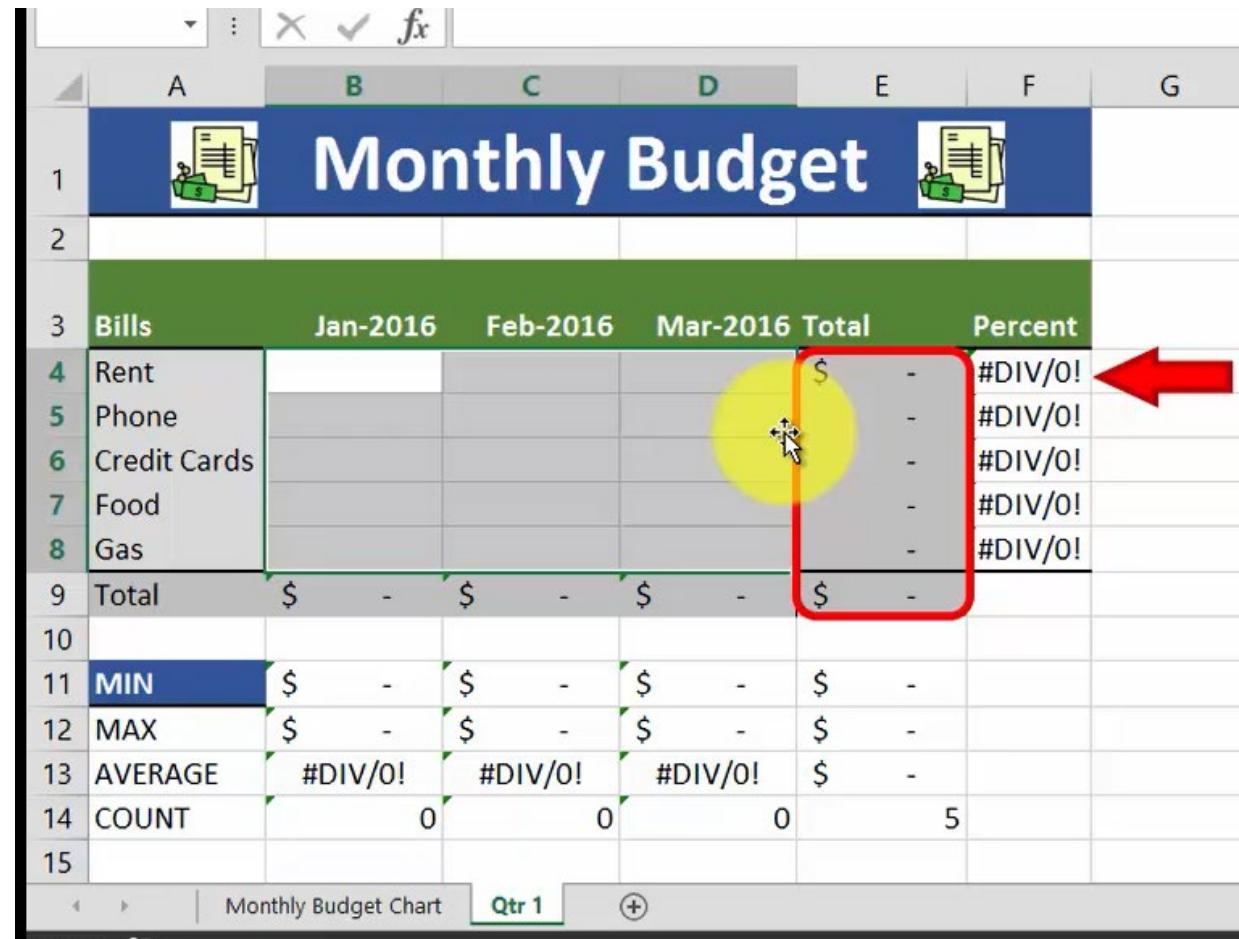
Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent
Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$3,600.00	66.42%
Phone	50.00	50.00	50.00	150.00	2.77%
Credit Cards	400.00	150.00	75.00	625.00	11.53%
Food	300.00	350.00	225.00	875.00	16.14%
Gas	50.00	40.00	80.00	170.00	3.14%
<b>Total</b>	<b>\$ 2,000.00</b>	<b>\$ 1,790.00</b>	<b>\$ 1,630.00</b>	<b>\$5,420.00</b>	

\*Copyright 2021 datatalks Qtr 1

# Excel 101 Topic

- 1. Excel Fundamentals
- 2. Entering Data
- 3. Working with Functions
- 4. Modifying A Worksheet
- 5. Creating Charts
- 6. Printing Worksheet
- 7. Working with Templates

## 1) Intro to excel templates



	A	B	C	D	E	F	G
1							
2							
3	Bills	Jan-2016	Feb-2016	Mar-2016	Total	Percent	
4	Rent				\$ -	#DIV/0!	
5	Phone				\$ -	#DIV/0!	
6	Credit Cards				\$ -	#DIV/0!	
7	Food				\$ -	#DIV/0!	
8	Gas				\$ -	#DIV/0!	
9	Total	\$ -	\$ -	\$ -	\$ -	\$ -	
10							
11	MIN	\$ -	\$ -	\$ -	\$ -	\$ -	
12	MAX	\$ -	\$ -	\$ -	\$ -	\$ -	
13	AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	\$ -		
14	COUNT	0	0	0	0	5	
15							

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates



2) Opening an existing template.

The screenshot shows the 'New' dialog box in Microsoft Excel. On the left, there's a sidebar with options like Home, New (which is selected), Open, Info, Save, Save As, Save as Adobe PDF, Print, Share, Export, Publish, Close, Account, and More... At the bottom of the sidebar are icons for Windows, Search, Task View, File Explorer, Edge, Google Chrome, Power BI, YouTube, and Excel. The main area displays several template cards:

- Blank workbook**: A simple grid with columns A, B, and C and rows 1 through 7.
- Simple loan calculator and...**: A template for calculating loans with a preview showing a table of monthly payments.
- Loan amortization schedule**: A template for creating an amortization schedule with a preview showing a table of principal and interest payments over time.
- Monthly college budget**: A template for managing college expenses with a preview showing a chart and a table of monthly cash flow.

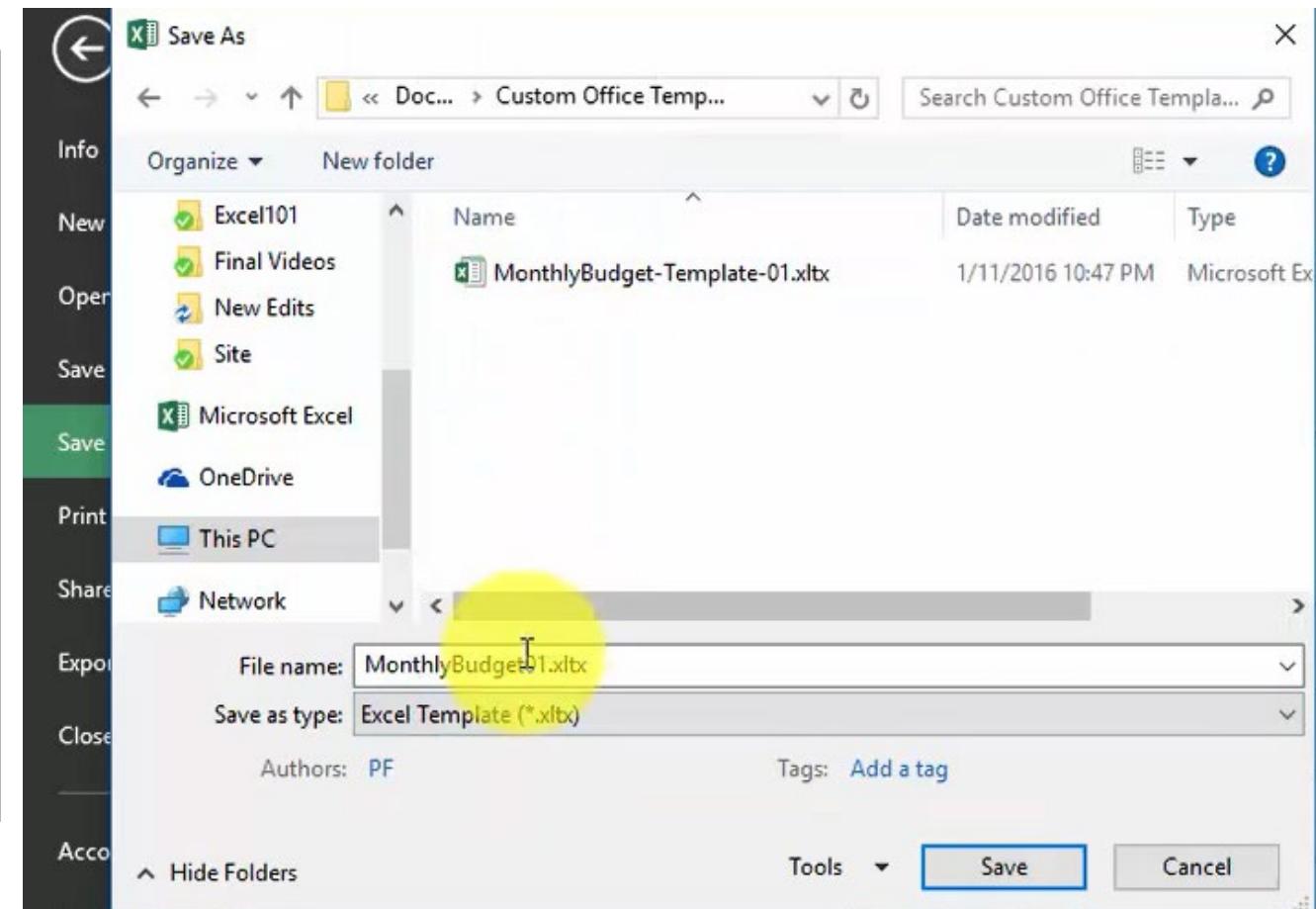
Below the templates is a search bar for online templates and a section for suggested searches: Business, Personal, Planners and Trackers, Lists, Budgets, Charts, Calendars. There are also four tutorial cards: 'Take a tour', 'Create a Drop-down list', 'Get started with Formulas', and 'Get to know Power Query'. At the very bottom, there are links for 'Make your first PivotTable', 'Going beyond PivotTables', and a preview of the April 20XX calendar.

\*Copyright 2021 datatalks

# Excel 101 Topic

1. Excel Fundamentals
2. Entering Data
3. Working with Functions
4. Modifying A Worksheet
5. Creating Charts
6. Printing Worksheet
7. Working with Templates

## 3) Creating a custom template.



# Excel 102 Topic

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 1) Understanding excel list structure

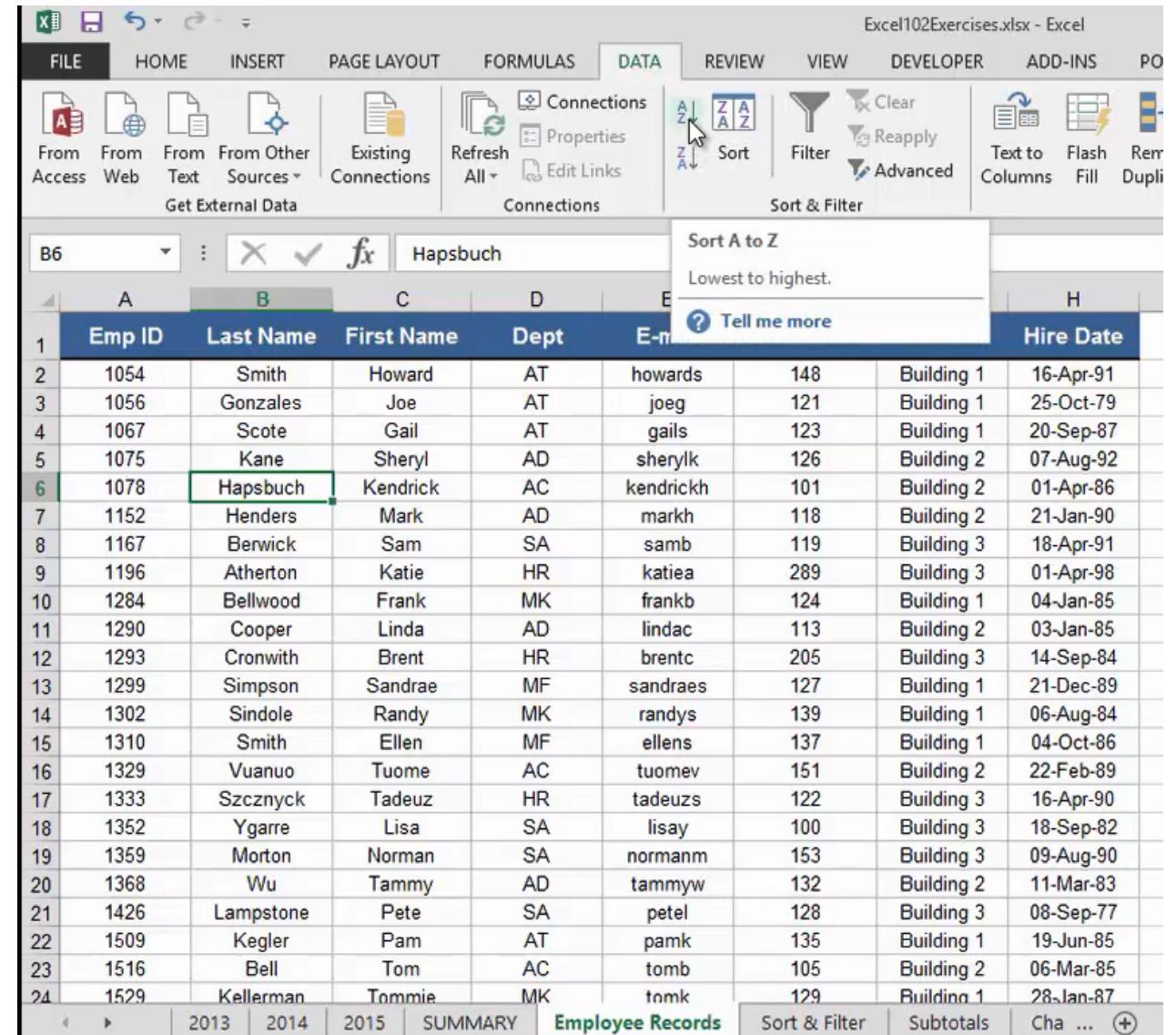
A	B	C	D	E	F	G	H	
1	Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
2	1054	Smith	Howard	AT	howards	148	Building 1	16-Apr-91
3	1056	Gonzales	Joe	AT	joeg	121	Building 1	25-Oct-79
4	1067	Scote	Gail	AT	gails	123	Building 1	20-Sep-87
5	1075	Kane	Sheryl	AD	sherylk	126	Building 2	07-Aug-92
6	1078	Hapsbuch	Kendrick	AC	kendrickh	101	Building 2	01-Apr-86
7	1152	Henders	Mark	AD	markh	118	Building 2	21-Jan-90
8	1167	Berwick	Sam	SA	samb	119	Building 3	18-Apr-91
9	1196	Atherton	Katie	HR	katiea	289	Building 3	01-Apr-98
10	1284	Bellwood	Frank	MK	frankb	124	Building 1	04-Jan-85
11	1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
12	1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
13	1299	Simpson	Sandrae	MF	sandraes	127	Building 1	21-Dec-89
14	1302	Sindole	Randy	MK	randys	139	Building 1	06-Aug-84
15	1310	Smith	Ellen	MF	ellens	137	Building 1	04-Oct-86
16	1329	Vuanuo	Tuome	AC	tuomev	151	Building 2	22-Feb-89
17								
18	1352	Ygarre	Lisa	SA	lisay	100	Building 3	18-Sep-82
19	1359	Morton	Norman	SA	normannm	153	Building 3	09-Aug-90
20	1368	Wu	Tammy	AD	tammyw	132	Building 2	11-Mar-83
21	1426	Lampstone	Pete	SA	petel	128	Building 3	08-Sep-77
22	1509	Kegler	Pam	AT	pamk	135	Building 1	19-Jun-85
23	1516	Bell	Tom	AC	tomb	105	Building 2	06-Mar-85
24	1529	Kellerman	Tommie	MK	tomk	129	Building 1	28-Jan-87

Ctrl A = Select ALL List

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Sorting a list using single level sort



Emp ID	Last Name	First Name	Dept	E-mail	Hire Date
1054	Smith	Howard	AT	howards	148 Building 1 16-Apr-91
1056	Gonzales	Joe	AT	joeg	121 Building 1 25-Oct-79
1067	Scote	Gail	AT	gails	123 Building 1 20-Sep-87
1075	Kane	Sheryl	AD	sherylk	126 Building 2 07-Aug-92
1078	Hapsbuch	Kendrick	AC	kendrickh	101 Building 2 01-Apr-86
1152	Henders	Mark	AD	markh	118 Building 2 21-Jan-90
1167	Berwick	Sam	SA	samb	119 Building 3 18-Apr-91
1196	Atherton	Katie	HR	katiea	289 Building 3 01-Apr-98
1284	Bellwood	Frank	MK	frankb	124 Building 1 04-Jan-85
1290	Cooper	Linda	AD	lindac	113 Building 2 03-Jan-85
1293	Cronwith	Brent	HR	brentc	205 Building 3 14-Sep-84
1299	Simpson	Sandrae	MF	sandraes	127 Building 1 21-Dec-89
1302	Sindole	Randy	MK	randys	139 Building 1 06-Aug-84
1310	Smith	Ellen	MF	ellens	137 Building 1 04-Oct-86
1329	Vuanuo	Tuome	AC	tuomev	151 Building 2 22-Feb-89
1333	Szcznyck	Tadeuz	HR	tadeuzs	122 Building 3 16-Apr-90
1352	Ygarre	Lisa	SA	lisay	100 Building 3 18-Sep-82
1359	Morton	Norman	SA	normannm	153 Building 3 09-Aug-90
1368	Wu	Tammy	AD	tammyw	132 Building 2 11-Mar-83
1426	Lampstone	Pete	SA	petel	128 Building 3 08-Sep-77
1509	Kegler	Pam	AT	pamk	135 Building 1 19-Jun-85
1516	Bell	Tom	AC	tomb	105 Building 2 06-Mar-85
1529	Kellerman	Tommie	MK	tomk	129 Building 1 28-Jan-87

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



### 3) Sorting a list using multilevel sorts.

The screenshot shows a Microsoft Excel spreadsheet titled "Employee Records". The data includes columns for Employee ID, Last Name, First Name, Department, Position, and various dates. A "Sort" dialog box is open over the data, illustrating how to perform multilevel sorting. The dialog shows two levels of sorting: "Last Name" is the primary sort key ("Sort On: Values, Order: A to Z"), and "First Name" is the secondary sort key ("Then by: Values, Order: A to Z"). A yellow arrow points to the "Sort" button in the dialog's title bar. Another yellow arrow points to the "Add Level" button in the dialog's toolbar. A callout bubble states "After 2007 – MS added 64 sort levels".

Employee Records

ID	Last Name	First Name	Department	Position	Date
1152	Sampson	Carla	SA	carlas	147
1075	Scote	Gail	AT	gails	123
1509	Simpson	Sandrae	MF	sandraes	127
1529	Sindole	Randy	MK	randys	120
1656	Smith	Howard	AT	howards	140
1426	Smith	Tadeusz	HR	tadeuzs	122
1984	Smith	Lise-Anne	SA	lise-annt	116
1676	Smith	Tuome	AC	tuomev	151
1995	Smith	Tammy	AD	tammyw	132
1359	Smith	Chack	AT	chacks	120
1931	Smith	Appan	SA	appans	118
1723	Smith	Vuanuo	AC	vuanuos	125
1949	Smith	Wu	AD	wus	100

Copyright 2021 datatalks

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER ADD-INS

From Access From Web From Text From Other Sources Existing Connections Refresh All Edit Links Connections

Connections

Sort Filter Reapply Advanced Text to Columns Flash Fill R

D31

H

1-Jan-90  
7-Aug-92  
9-Jun-85  
3-Jan-87  
1-Dec-87  
3-Sep-77  
1-Dec-97  
5-Oct-81  
1-Mar-98  
9-Aug-90  
1-Jun-89  
1-Feb-78

OK Cancel

Sort

Add Level Delete Level Copy Level Options... My data has headers

Column Sort On Order

Sort by Last Name Values A to Z

Then by First Name Values A to Z

After 2007 – MS added 64 sort levels

43

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 4) Using custom sorts in an excel list.

Screenshot of Microsoft Excel showing the 'Sort' dialog box open over a data list. The data list contains columns for Month, Year, Value, and Name. The 'Sort On' dropdown shows 'Values' and the 'Order' dropdown shows 'A to Z'. A mouse cursor is hovering over the 'Custom List...' option in the 'Order' dropdown menu.

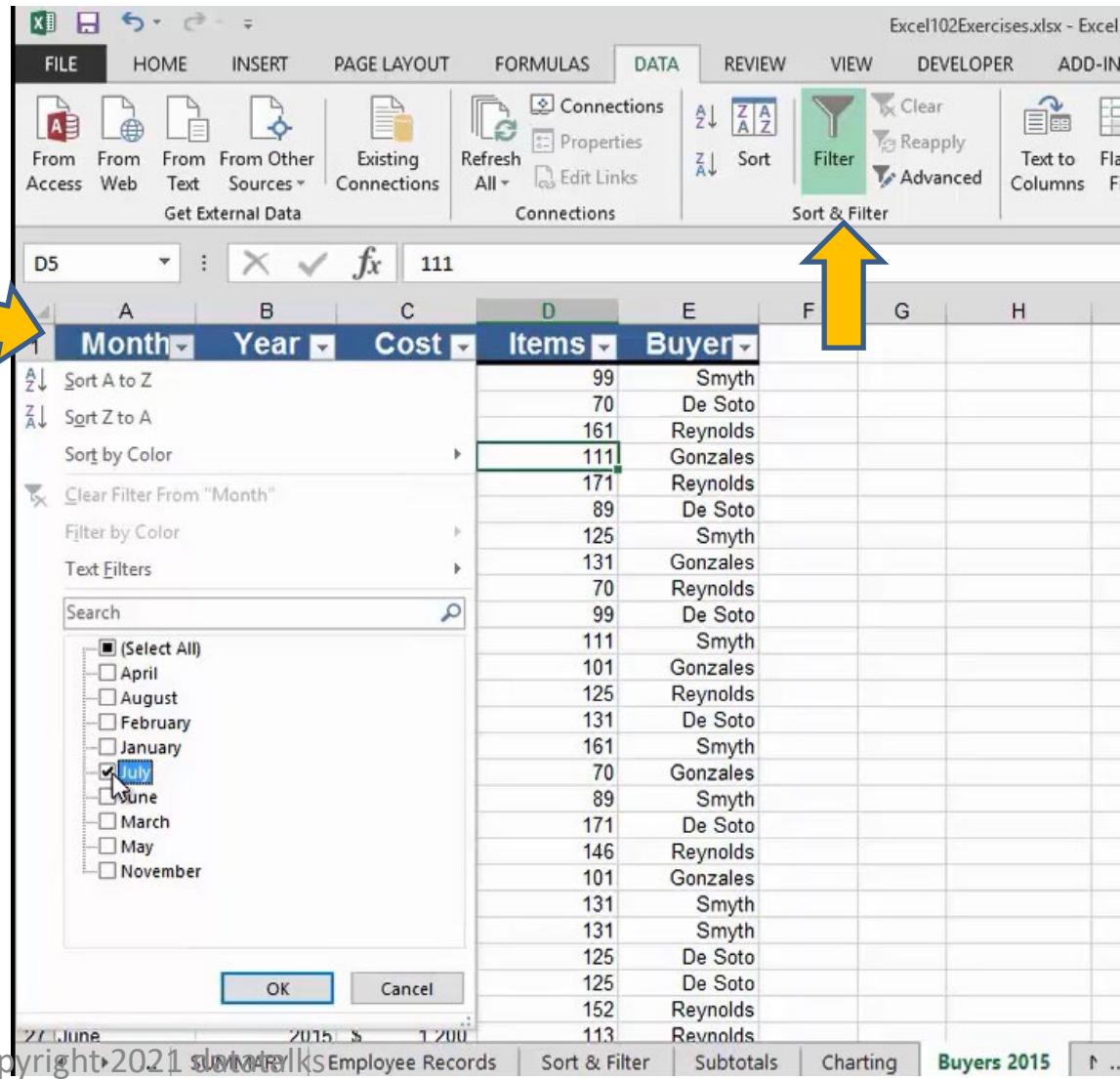
Month	Year	Value	Name
April	2015	\$ 1,105	70
April	2015	\$ 1,200	161
April	2015	\$ 1,690	111
August	2015	\$ 1,200	101
August	2015	\$ 1,350	146
August	2015	\$ 1,435	171
February	2015	\$ 1,672	89
February	2015	\$ 1,050	131
February	2015	\$ 1,050	131
January	2015	\$ 1,105	125
January	2015	\$ 1,105	125
July	2015	\$ 1,200	152
July	2015	\$ 1,200	113

\*Copyright 2021 datatalks Employee Records | Sort & Filter | Subtotals | Charting | Buyers 2015 | 44

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

### 5) Filter an excel list using the autofilter tool.



The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". The ribbon is visible at the top with the "DATA" tab selected. In the "Sort & Filter" section of the ribbon, the "Filter" button is highlighted with a yellow arrow. The main area of the screen displays a data table with columns labeled "Month", "Year", "Cost", "Items", and "Buyer". A filter dropdown menu is open over the "Month" column, showing a list of months with "July" checked. The data table below contains rows of numerical values and names. The status bar at the bottom indicates "27 June 2015" and "1 200".

Month	Year	Cost	Items	Buyer
111		99	Smyth	
		70	De Soto	
		161	Reynolds	
		111	Gonzales	
		171	Reynolds	
		89	De Soto	
		125	Smyth	
		131	Gonzales	
		70	Reynolds	
		99	De Soto	
		111	Smyth	
		101	Gonzales	
		125	Reynolds	
		131	De Soto	
		161	Smyth	
		70	Gonzales	
		89	Smyth	
		171	De Soto	
		146	Reynolds	
		101	Gonzales	
		131	Smyth	
		131	Smyth	
		125	De Soto	
		125	De Soto	
		152	Reynolds	
		113	Reynolds	

\*Copyright 2021 dataTalks Employee Records Sort & Filter Subtotals Charting Buyers 2015

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



### 6) Creating subtotals in a list

The screenshot shows a Microsoft Excel spreadsheet with data in columns A through H. The data includes product names like 'Chocolate Chocolate Chip' and 'Fudge Brownie', and their corresponding sales values. The 'DATA' tab is selected in the ribbon, and the 'Subtotals' button under the 'Sort & Filter' group is highlighted. A yellow arrow points from the top right towards the 'Subtotal' dialog box. The dialog box is open, showing settings for creating subtotals at each change in the 'Product' column, using the 'Sum' function, and adding subtotals to the 'Sales' column. The 'OK' button is visible at the bottom of the dialog.

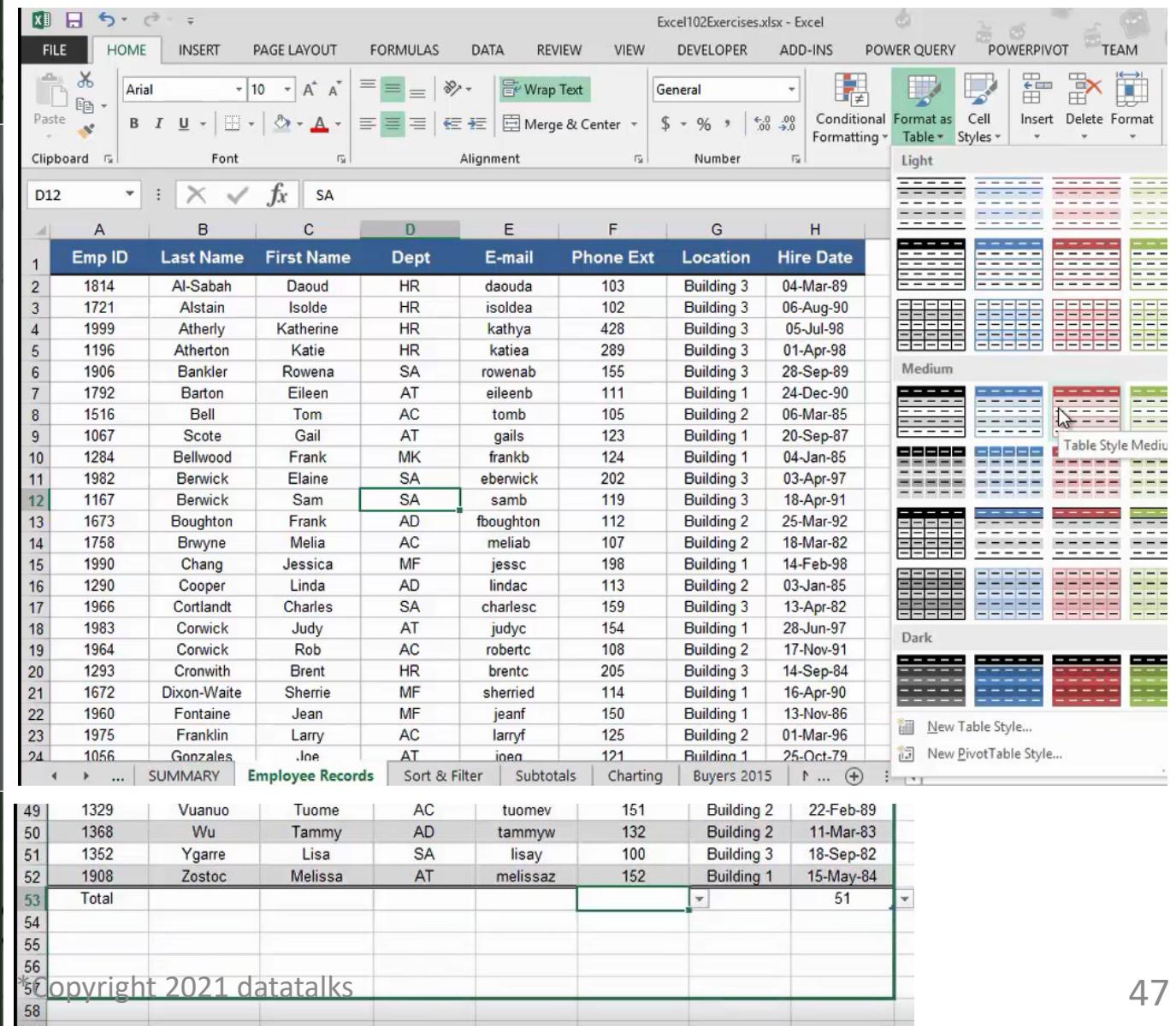
Product	Quantity	Unit Price	Total Sales
Chocolate Chocolate Chip	100	\$12.00	\$1,200.00
Chocolate Chocolate Chip	95	\$10.55	\$1,002.25
Chocolate Chocolate Chip	85	\$11.00	\$935.00
Chocolate Chocolate Chip	80	\$11.00	\$880.00
Chocolate Chocolate Chip	95	\$11.00	\$1,045.00
Fudge Brownie	23	\$16.00	\$368.00
Fudge Brownie	100	\$9.99	\$999.00
Strawberry	28	\$13.50	\$378.00

First Step Sort the Column Product

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 7) Format a list as a table.



The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". The "HOME" tab is selected in the ribbon. A table of employee records is displayed, starting with columns: Emp ID, Last Name, First Name, Dept, E-mail, Phone Ext, Location, and Hire Date. The first row contains the column headers. The "Format as Table" button in the ribbon is highlighted. A dropdown menu is open, showing categories: Light, Medium, and Dark, each with several pre-defined table styles. The "Table Style Medium" style is currently selected. At the bottom of the dropdown menu are two buttons: "New Table Style..." and "New PivotTable Style...".

	Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
1	1814	Al-Sabah	Daoud	HR	daouda	103	Building 3	04-Mar-89
2	1721	Alstain	Isolede	HR	isoldea	102	Building 3	06-Aug-90
3	1999	Atherly	Katherine	HR	kathya	428	Building 3	05-Jul-98
4	1196	Atherton	Katie	HR	katiea	289	Building 3	01-Apr-98
5	1906	Bankler	Rowena	SA	rowenab	155	Building 3	28-Sep-89
6	1792	Barton	Eileen	AT	eileenb	111	Building 1	24-Dec-90
7	1516	Bell	Tom	AC	tomb	105	Building 2	06-Mar-85
8	1067	Scote	Gail	AT	gails	123	Building 1	20-Sep-87
9	1284	Bellwood	Frank	MK	frankb	124	Building 1	04-Jan-85
10	1982	Berwick	Elaine	SA	eberwick	202	Building 3	03-Apr-97
11	1167	Berwick	Sam	SA	samb	119	Building 3	18-Apr-91
12	1673	Boughton	Frank	AD	fboughton	112	Building 2	25-Mar-92
13	1758	Brwyne	Melia	AC	meliab	107	Building 2	18-Mar-82
14	1990	Chang	Jessica	MF	jessc	198	Building 1	14-Feb-98
15	1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
16	1966	Cortlandt	Charles	SA	charlesc	159	Building 3	13-Apr-82
17	1983	Corwick	Judy	AT	judyc	154	Building 1	28-Jun-97
18	1964	Corwick	Rob	AC	robertc	108	Building 2	17-Nov-91
19	1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
20	1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1	16-Apr-90
21	1960	Fontaine	Jean	MF	jeanf	150	Building 1	13-Nov-86
22	1975	Franklin	Larry	AC	larryf	125	Building 2	01-Mar-96
23	1056	Gonzales	.Ine	AT	ineo	121	Building 1	25-Oct-79
24								

Employee Records

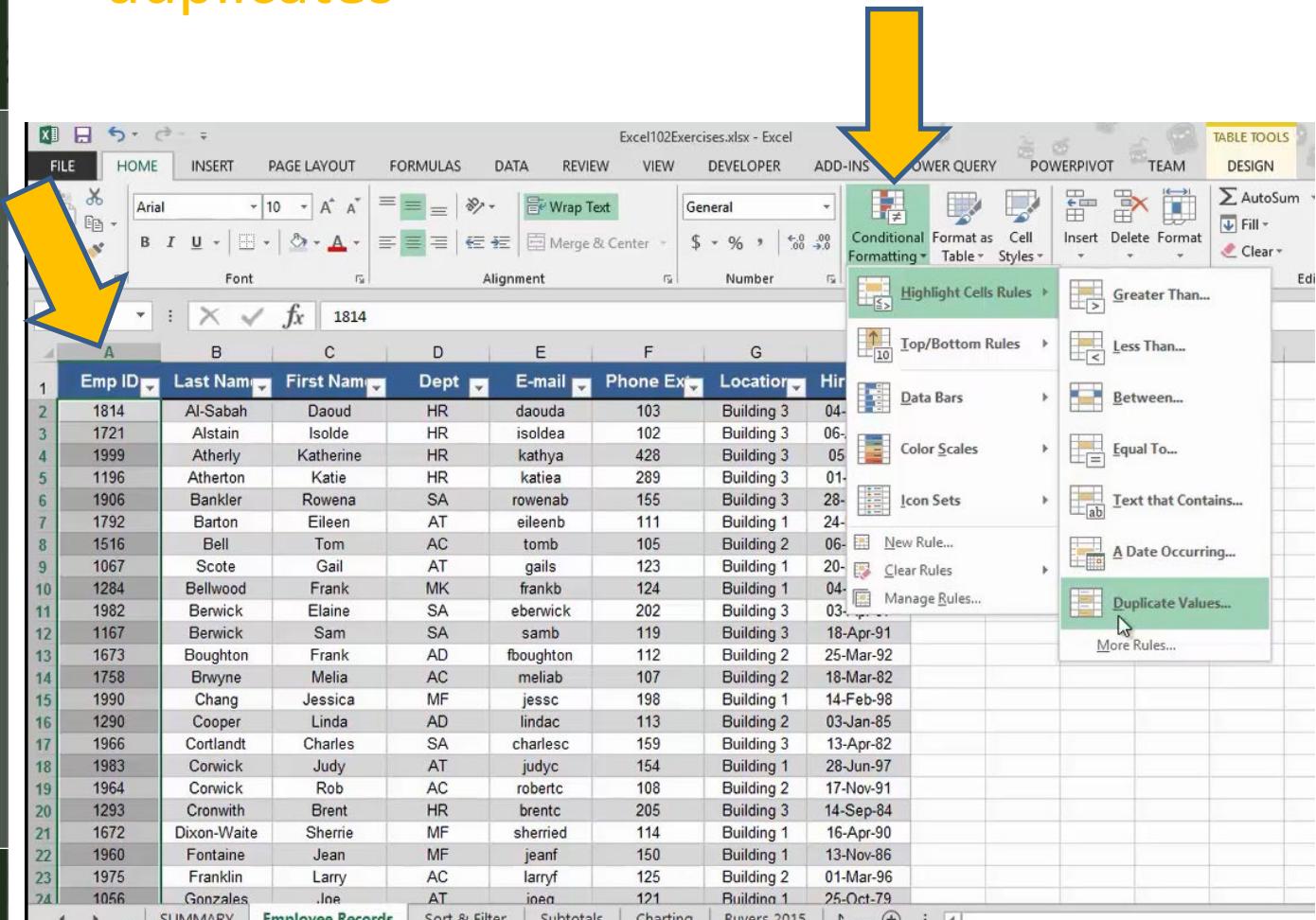
Sort & Filter Subtotals Charting Buyers 2015

Copyright 2021 datatalks

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 8) Using conditional formatting to find duplicates



The screenshot shows a Microsoft Excel spreadsheet titled "Employee Records". The ribbon at the top has the "TABLE TOOLS" tab selected, specifically the "DESIGN" tab under "CONDITIONAL FORMATTING". A yellow arrow points to the "Conditional Formatting" button in the ribbon. Another yellow arrow points to the "Duplicate Values..." option in the dropdown menu, which is highlighted in green.

Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
1814	Al-Sabah	Daoud	HR	daouda	103	Building 3	04-Mar-90
1721	Alstain	Isolde	HR	isoldea	102	Building 3	06-Mar-90
1999	Atherly	Katherine	HR	kathya	428	Building 3	05-Mar-90
1196	Atherton	Katie	HR	katiea	289	Building 3	01-Mar-90
1906	Bankler	Rowena	SA	rowenab	155	Building 3	28-Mar-90
1792	Barton	Eileen	AT	eileenb	111	Building 1	24-Mar-90
1516	Bell	Tom	AC	tomb	105	Building 2	06-Mar-90
1067	Scote	Gail	AT	gails	123	Building 1	20-Mar-90
1284	Bellwood	Frank	MK	frankb	124	Building 1	04-Mar-90
1982	Berwick	Elaine	SA	ebenwick	202	Building 3	03-Mar-90
1167	Berwick	Sam	SA	samb	119	Building 3	18-Apr-91
1673	Boughton	Frank	AD	fboughton	112	Building 2	25-Mar-92
1758	Brwyne	Melia	AC	meliab	107	Building 2	18-Mar-82
1990	Chang	Jessica	MF	jessc	198	Building 1	14-Feb-98
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1966	Cortlandt	Charles	SA	charlesc	159	Building 3	13-Apr-82
1983	Corwick	Judy	AT	judyc	154	Building 1	28-Jun-97
1964	Corwick	Rob	AC	robertc	108	Building 2	17-Nov-91
1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1	16-Apr-90
1960	Fontaine	Jean	MF	jeanf	150	Building 1	13-Nov-86
1975	Franklin	Larry	AC	larryf	125	Building 2	01-Mar-96
1056	Gonzales	Jane	AT	ineo	121	Building 1	25-Oct-79

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 9) Removing duplicates

The screenshot shows a Microsoft Excel spreadsheet titled "Employee Records" with data for employees. The columns are labeled: Emp ID, Last Name, First Name, Dept, E-mail, Phone Ext, Location, and Hire Date. A dropdown menu in the top right corner is open, showing the "Data Tools" section. Within this section, the "Remove Duplicates" option is highlighted. A tooltip for "Remove Duplicates" explains that it "Delete duplicate rows from a sheet. You can pick which columns should be checked for duplicate information." A modal dialog box is overlaid on the spreadsheet, prompting the user to "To delete duplicate values, select one or more columns that contain duplicates." It includes "Select All" and "Unselect All" buttons, a checkbox for "My data has headers" (which is checked), and a "Columns" section where the "Emp ID" checkbox is selected. At the bottom of the dialog are "OK" and "Cancel" buttons.

Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
1814	Al-Sabah	Daoud	HR	daouda	103	Building 3	04-Mar-89
1721	Alstain	Isoldie	HR	isoldiea	102	Building 3	06-Aug-90
1999	Athe						
1196	Ather						
1906	Bank						
1792	Bart						
1516	Be						
1067	Sco						
1284	Bellw						
1982	Berw						
1167	Berw						
1673	Boug						
1758	Brwy						
1990	Chang	Jessica	MF	jessc	196	Building 1	14-Feb-98
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1966	Cortlandt	Charles	SA	charlesc	159	Building 3	13-Apr-82
1983	Corwick	Judy	AT	judyc	154	Building 1	28-Jun-97
1964	Corwick	Rob	AC	robertc	108	Building 2	17-Nov-91
1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1	16-Apr-90
1960	Fontaine	Jean	MF	jeanf	150	Building 1	13-Nov-86
1975	Franklin	Larry	AC	larryf	125	Building 2	01-Mar-96
1056	Gonzales	Joe	AT	inao	121	Building 1	25-Oct-79

\*Copyright 2021 datatalks

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 1) Excel function dsum

The screenshot shows a Microsoft Excel interface with the 'Formulas' tab selected in the ribbon. A formula bar at the top contains the text '=DSUM(A1:F59,F1,H4:H5)'. Below the ribbon is a 'Function Library' group containing icons for various functions like SUM, AVERAGE, COUNT, etc. To the right of the ribbon are 'Defined Names' and 'Formula Auditing' buttons. The main area displays a table of expenses:

Category	January	February	March	Total Expenses
Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00
Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00
Supplies	\$ 3,300.00	\$ 3,500.		
Telemarketing	\$ 3,825.00	\$ 3,725.		
Contractors	\$ 8,900.00	\$ 10,315.		
Consultants	\$ 6,250.00	\$ 6,000.		
Rent	\$ 8,000.00	\$ 8,000.		
Miscellaneous	\$ 11,500.00	\$ 12,500.		
Advertising	\$ 12,250.00	\$ 12,250.		
Clerical Support	\$ 25,000.00	\$ 24,000.		
Technical Support	\$ 800.00	\$ 950.		
Overhead	\$ 850.00	\$ 750.		
Maintenance	\$ 940.00	\$ 950.		
Telephone	\$ 980.00	\$ 850.		
Contractors	\$ 1,250.00	\$ 1,250.		
Software	\$ 1,150.00	\$ 1,255.		
Supplies	\$ 2,410.00	\$ 1,850.		
Telemarketing	\$ 3,200.00	\$ 3,760.		
Copying	\$ 5,000.00	\$ 4,800.		
Consultants	\$ 5,250.00	\$ 8,990.00	\$ 5,515.00	\$ 19,755.00
Rent	\$ 6,020.00	\$ 6,020.00	\$ 6,020.00	\$ 18,060.00

To the right of the table, a small secondary table highlights the 'Supplies' row with the formula `F1,H4:H5`.

A 'Function Arguments' dialog box is open over the table, showing the parameters for the DSUM function:

DSUM	
Database	A1:F59
Field	F1
Criteria	H4:H5

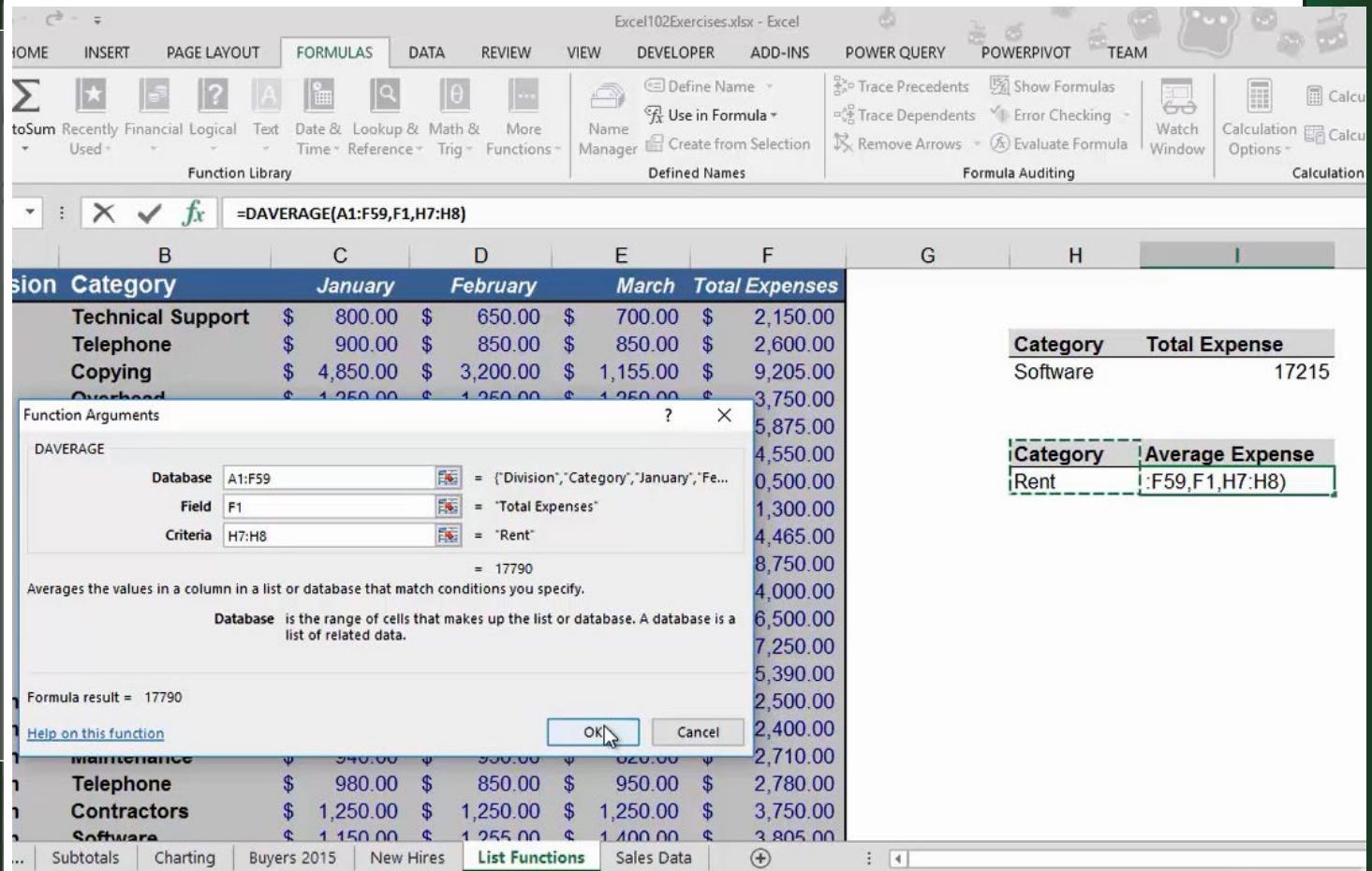
The 'Formula result =' field shows the value `25275`. The 'Help on this function' link is visible at the bottom of the dialog.

\*Copyright 2021 datatalks

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Excel function daverage



The screenshot shows an Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". The formula bar displays the formula =DAVERAGE(A1:F59,F1,H7:H8). The "FORMULAS" tab is selected in the ribbon. A "Function Arguments" dialog box is open, showing the DAVERAGE function with the following parameters:

- Database: A1:F59
- Field: F1
- Criteria: H7:H8

The "Criteria" range is set to "Rent". The formula result is shown as 17790. The dialog box also contains a description of the DAVERAGE function and an "OK" button.

The main spreadsheet area contains a table of expenses:

Division	Category	January	February	March	Total Expenses
Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00	
Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00	
Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00	
Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00	
				\$ 5,875.00	
				\$ 4,550.00	
				\$ 5,000.00	
				\$ 1,300.00	
				\$ 4,465.00	
				\$ 8,750.00	
				\$ 4,000.00	
				\$ 6,500.00	
				\$ 7,250.00	
				\$ 5,390.00	
				\$ 2,500.00	
				\$ 2,400.00	
				\$ 2,710.00	
Maintenance	\$ 940.00	\$ 950.00	\$ 920.00	\$ 2,780.00	
Telephone	\$ 980.00	\$ 850.00	\$ 950.00	\$ 2,780.00	
Contractors	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00	
Software	\$ 1,150.00	\$ 1,255.00	\$ 1,400.00	\$ 3,805.00	

On the right side of the screen, there are two small preview tables:

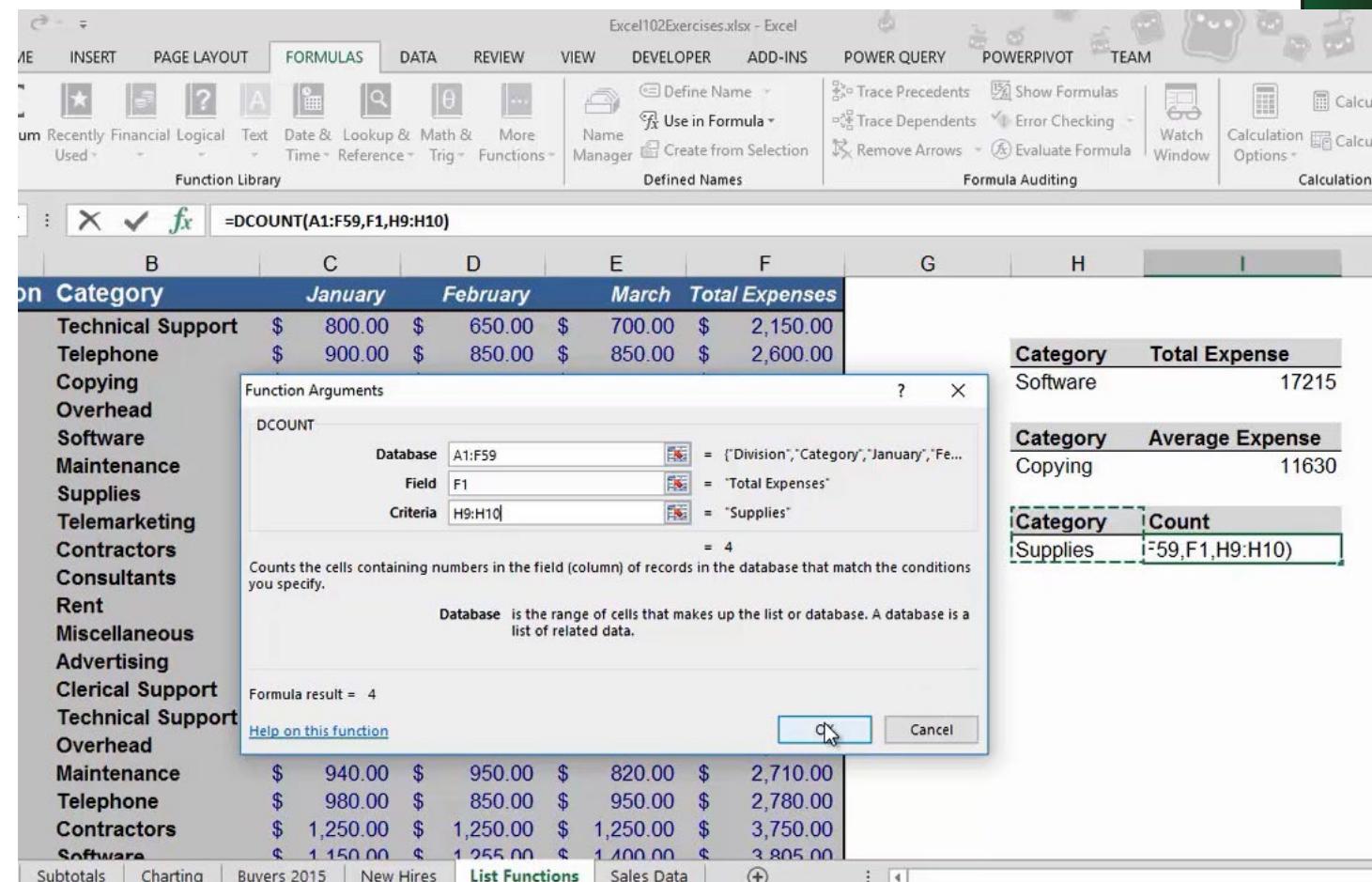
Category	Total Expense
Software	17215

Category	Average Expense
Rent	(F59,F1,H7:H8)

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 3) Excel function dcount



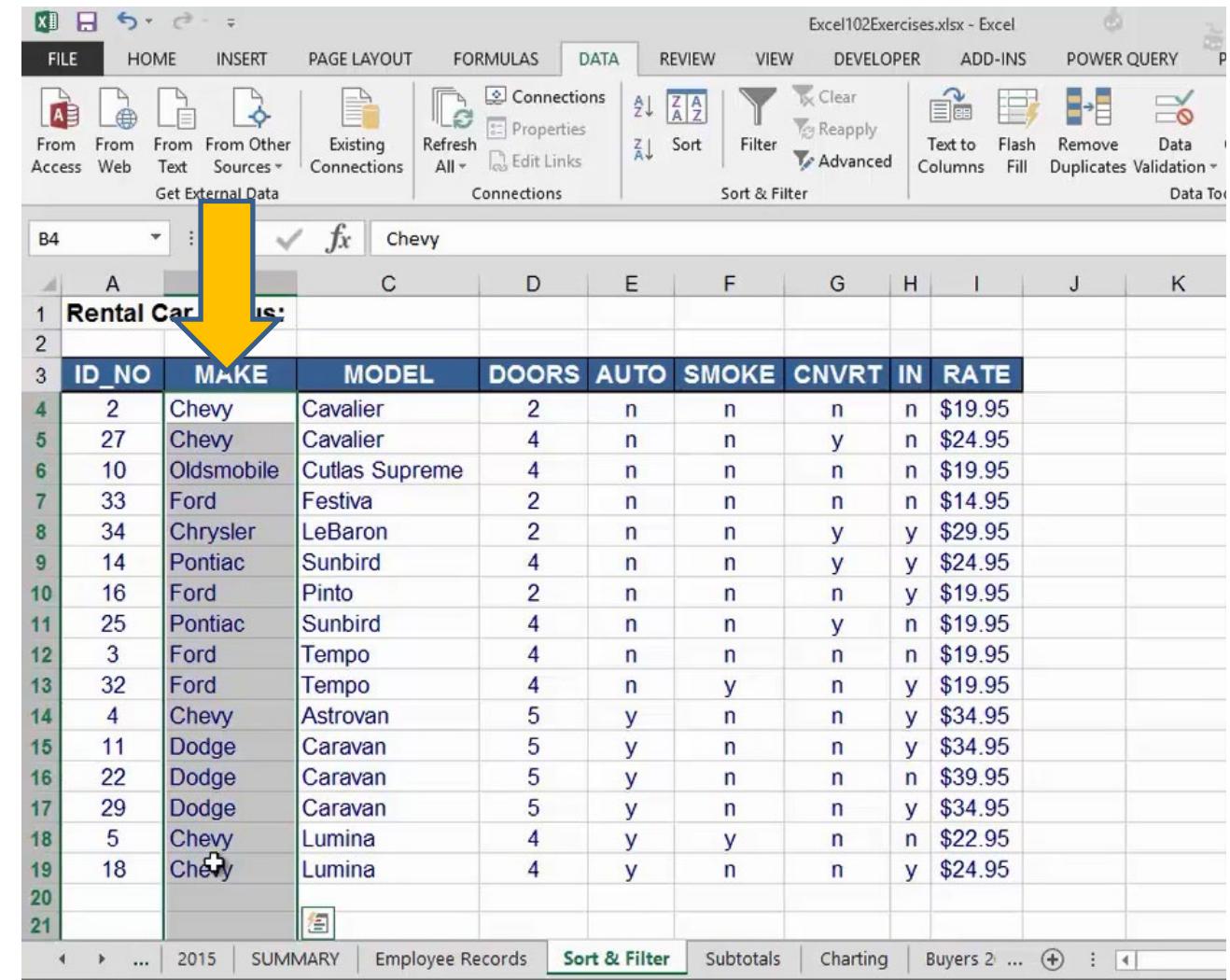
The screenshot shows an Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". The formula bar displays the formula `=DCOUNT(A1:F59,F1,H9:H10)`. The "FORMULAS" tab is selected in the ribbon. A "Function Arguments" dialog box is open, showing the parameters for the DCOUNT function: Database (A1:F59), Field (F1), and Criteria (H9:H10). The formula result is shown as 4. The background contains a table of expenses categorized by department (Category: Technical Support, Telephone, Copying, Overhead, Software, Maintenance, Supplies, Telemarketing, Contractors, Consultants, Rent, Miscellaneous, Advertising, Clerical Support, Technical Support, Overhead, Maintenance, Telephone, Contractors, Software) and their corresponding expenses for January, February, March, and Total Expenses.

Category	January	February	March	Total Expenses
Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
Copying				
Overhead				
Software				
Maintenance				
Supplies				
Telemarketing				
Contractors				
Consultants				
Rent				
Miscellaneous				
Advertising				
Clerical Support				
Technical Support				
Overhead				
Maintenance	\$ 940.00	\$ 950.00	\$ 820.00	\$ 2,710.00
Telephone	\$ 980.00	\$ 850.00	\$ 950.00	\$ 2,780.00
Contractors	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
Software	\$ 1,150.00	\$ 1,255.00	\$ 1,400.00	\$ 3,805.00

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. **Excel data validation**
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 1) Understanding the need for data validation

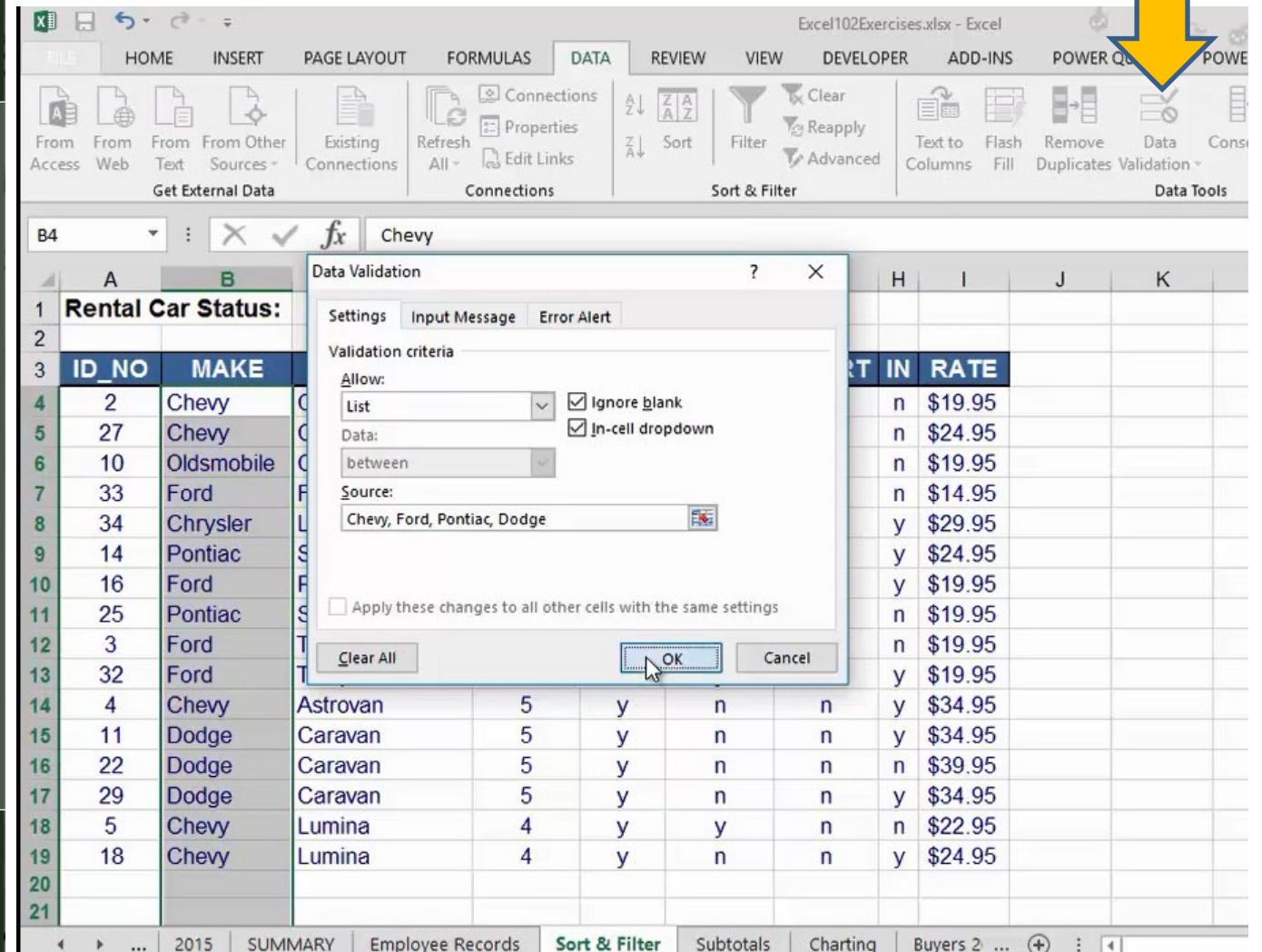


ID_NO	MAKE	MODEL	DOORS	AUTO	SMOKE	CNVRT	IN	RATE
2	Chevy	Cavalier	2	n	n	n	n	\$19.95
27	Chevy	Cavalier	4	n	n	y	n	\$24.95
10	Oldsmobile	Cutlas Supreme	4	n	n	n	n	\$19.95
33	Ford	Festiva	2	n	n	n	n	\$14.95
34	Chrysler	LeBaron	2	n	n	y	y	\$29.95
14	Pontiac	Sunbird	4	n	n	y	y	\$24.95
16	Ford	Pinto	2	n	n	n	y	\$19.95
25	Pontiac	Sunbird	4	n	n	y	n	\$19.95
3	Ford	Tempo	4	n	n	n	n	\$19.95
32	Ford	Tempo	4	n	y	n	y	\$19.95
4	Chevy	Astrovan	5	y	n	n	y	\$34.95
11	Dodge	Caravan	5	y	n	n	y	\$34.95
22	Dodge	Caravan	5	y	n	n	n	\$39.95
29	Dodge	Caravan	5	y	n	n	y	\$34.95
5	Chevy	Lumina	4	y	y	n	n	\$22.95
18	Chevy	Lumina	4	y	n	n	y	\$24.95

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. **Excel data validation**
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Creating a Validation list



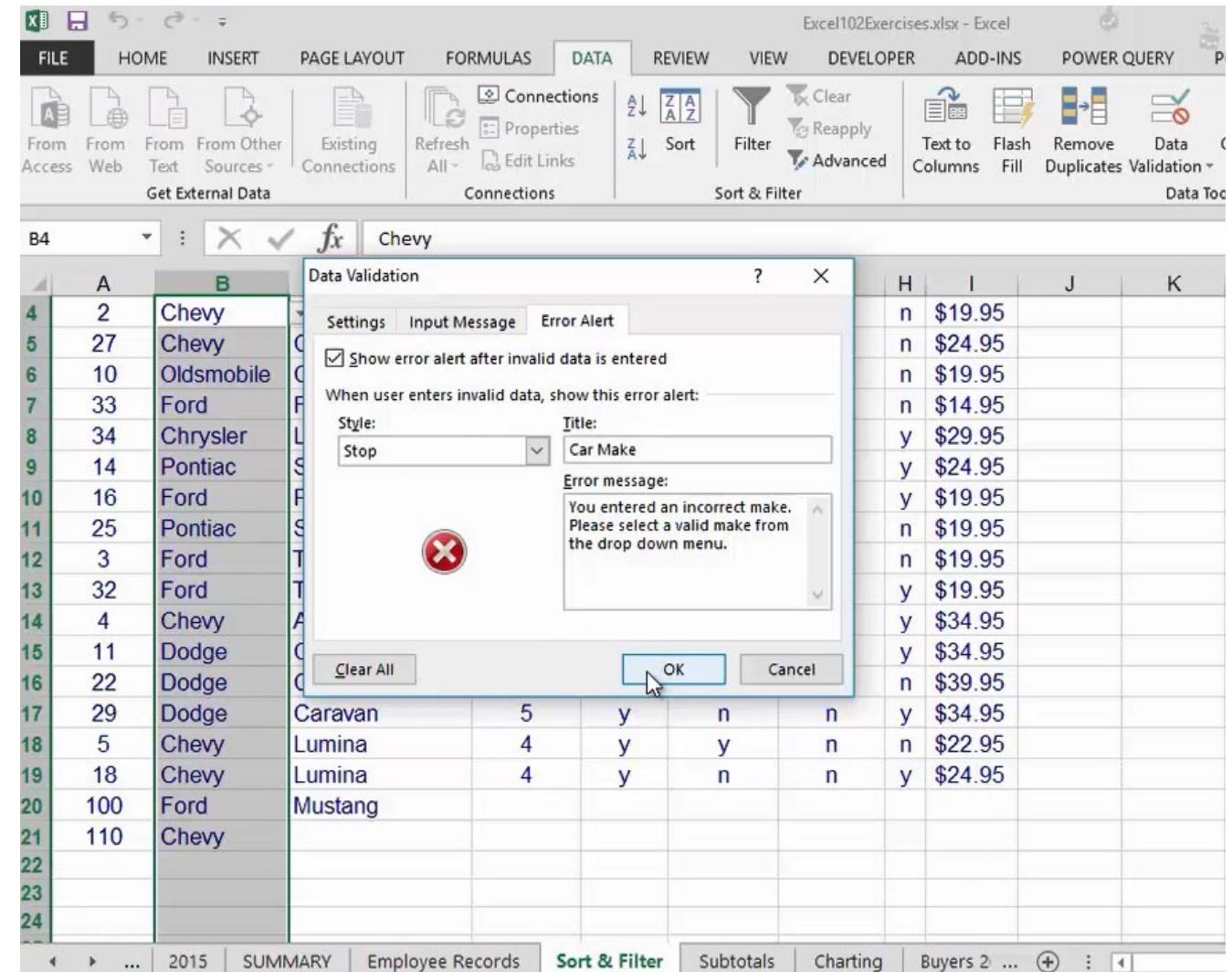
The screenshot shows an Excel spreadsheet titled "Excel102Exercises.xlsx". The "DATA" tab is selected in the ribbon. A yellow arrow points to the "Data Tools" button in the ribbon. The "Data Validation" dialog box is open over the spreadsheet. The "Validation criteria" section shows "Allow: List" selected, "Data: between", and "Source: Chevy, Ford, Pontiac, Dodge". The "OK" button is highlighted with a mouse cursor.

ID_NO	MAKE	IN	RATE
2	Chevy	n	\$19.95
27	Chevy	n	\$24.95
10	Oldsmobile	n	\$19.95
33	Ford	n	\$14.95
34	Chrysler	y	\$29.95
14	Pontiac	y	\$24.95
16	Ford	y	\$19.95
25	Pontiac	y	\$19.95
3	Ford	n	\$19.95
32	Ford	n	\$19.95
4	Chevy	Astrovan	\$34.95
11	Dodge	Caravan	\$34.95
22	Dodge	Caravan	\$39.95
29	Dodge	Caravan	\$34.95
5	Chevy	Lumina	\$22.95
18	Chevy	Lumina	\$24.95

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 3) Adding a custom validation error



The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx". The "DATA" tab is selected in the ribbon. A dropdown menu is open over cell B4, showing a list of car makes: Chevy, Chevy, Oldsmobile, Ford, Chrysler, Pontiac, Ford, Pontiac, Ford, Ford, Chevy, Dodge, Dodge, Dodge, Chevy, Lumina, Lumina, Ford, and Chevy. The "Data Validation" dialog box is displayed, with the "Error Alert" tab selected. It contains the following settings:

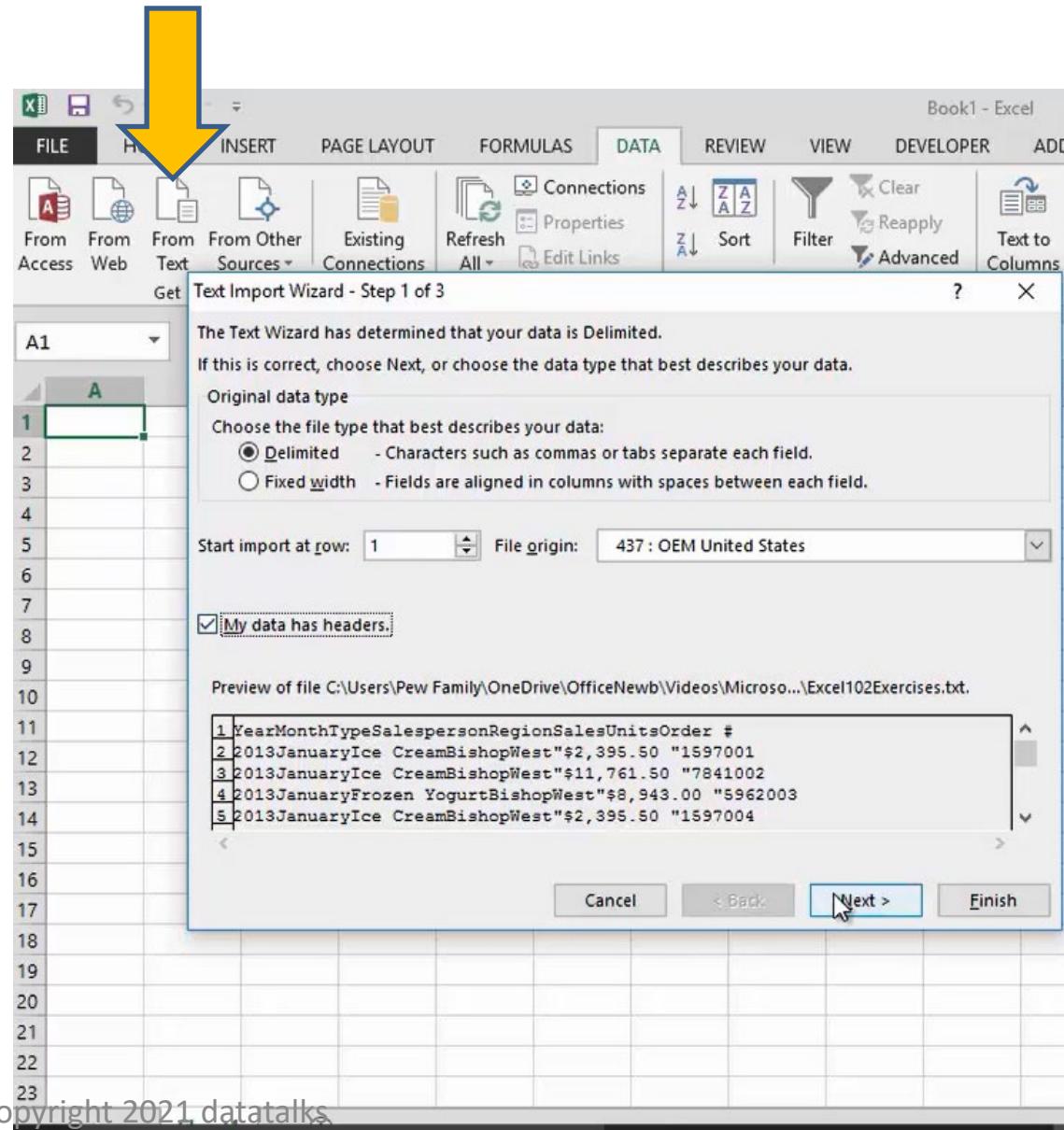
- Show error alert after invalid data is entered
- When user enters invalid data, show this error alert:
  - Style: Stop
  - Title: Car Make
  - Error message: You entered an incorrect make. Please select a valid make from the drop down menu.

The "OK" button is highlighted with a mouse cursor. The background spreadsheet shows columns H through K with various data entries.

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

### 1) Importing data from text files.



The Text Wizard has determined that your data is Delimited.  
If this is correct, choose Next, or choose the data type that best describes your data.

Original data type  
Choose the file type that best describes your data:  
 Delimited - Characters such as commas or tabs separate each field.  
 Fixed width - Fields are aligned in columns with spaces between each field.

Start import at row: 1 File origin: 437 : OEM United States

My data has headers.

Preview of file C:\Users\Pew Family\OneDrive\OfficeNewb\Videos\Microso...\\Excel102Exercises.txt.

Year	Month	Type	Salesperson	Region	Sales	Units	Order #
2013	January	Ice Cream	Bishop	West	\$2,395.50	"1597001	
2013	January	Ice Cream	Bishop	West	\$11,761.50	"7841002	
2013	January	Frozen Yogurt	Bishop	West	\$8,943.00	"5962003	
2013	January	Ice Cream	Bishop	West	\$2,395.50	"1597004	

Cancel < Back Next > Finish

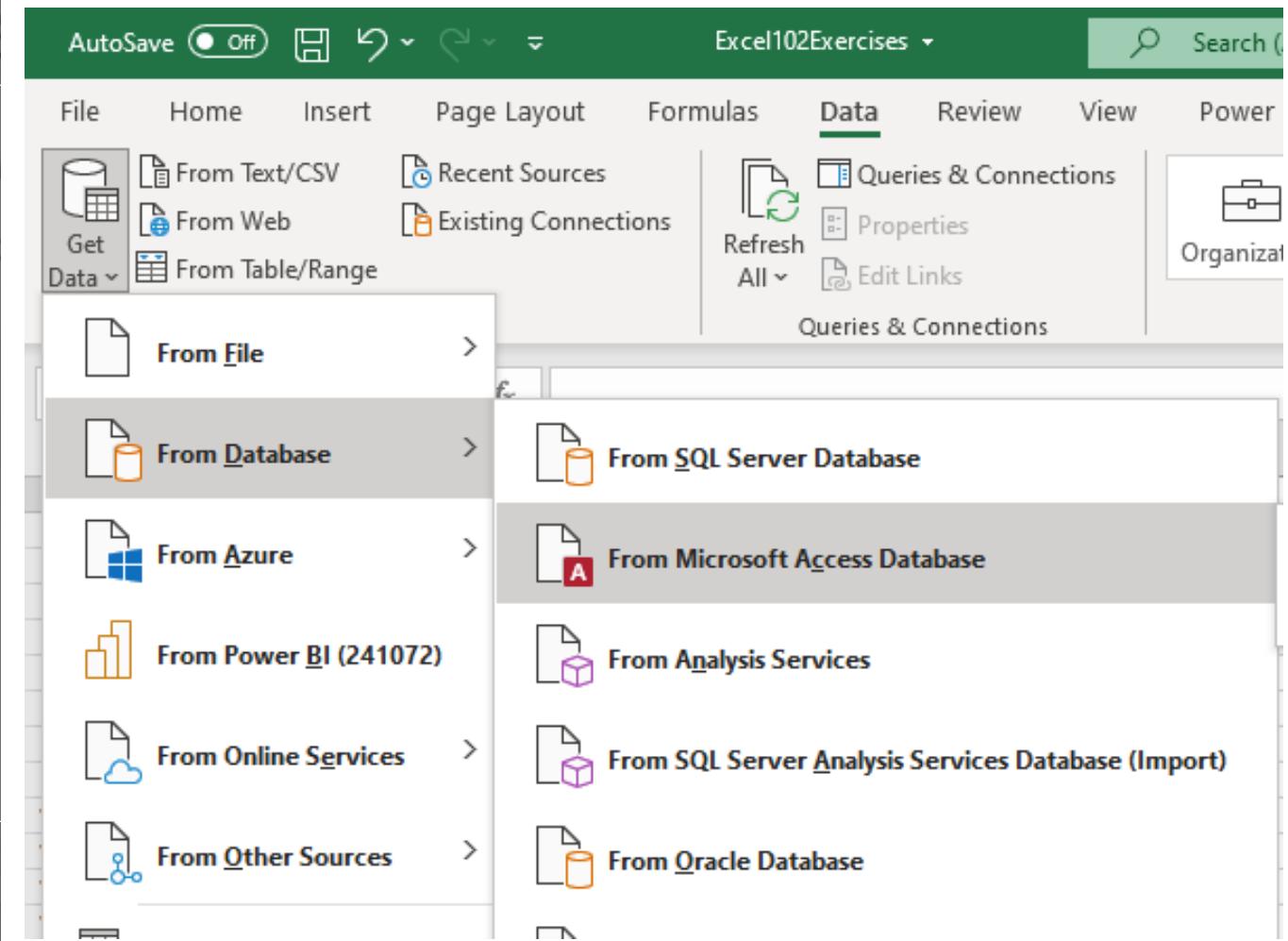
\*Copyright 2021 datatalks

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



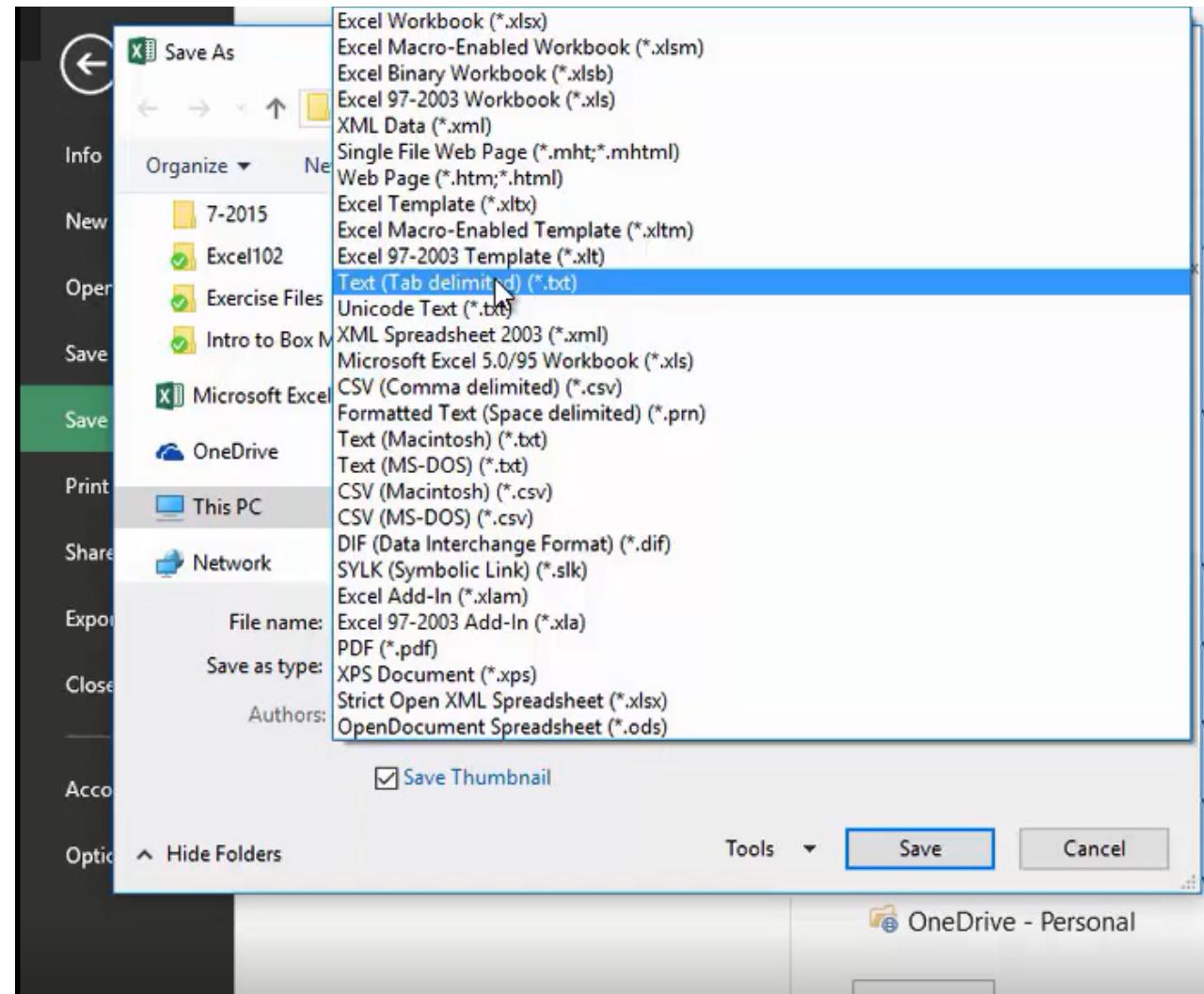
## 2) Importing data from Microsoft access.



# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

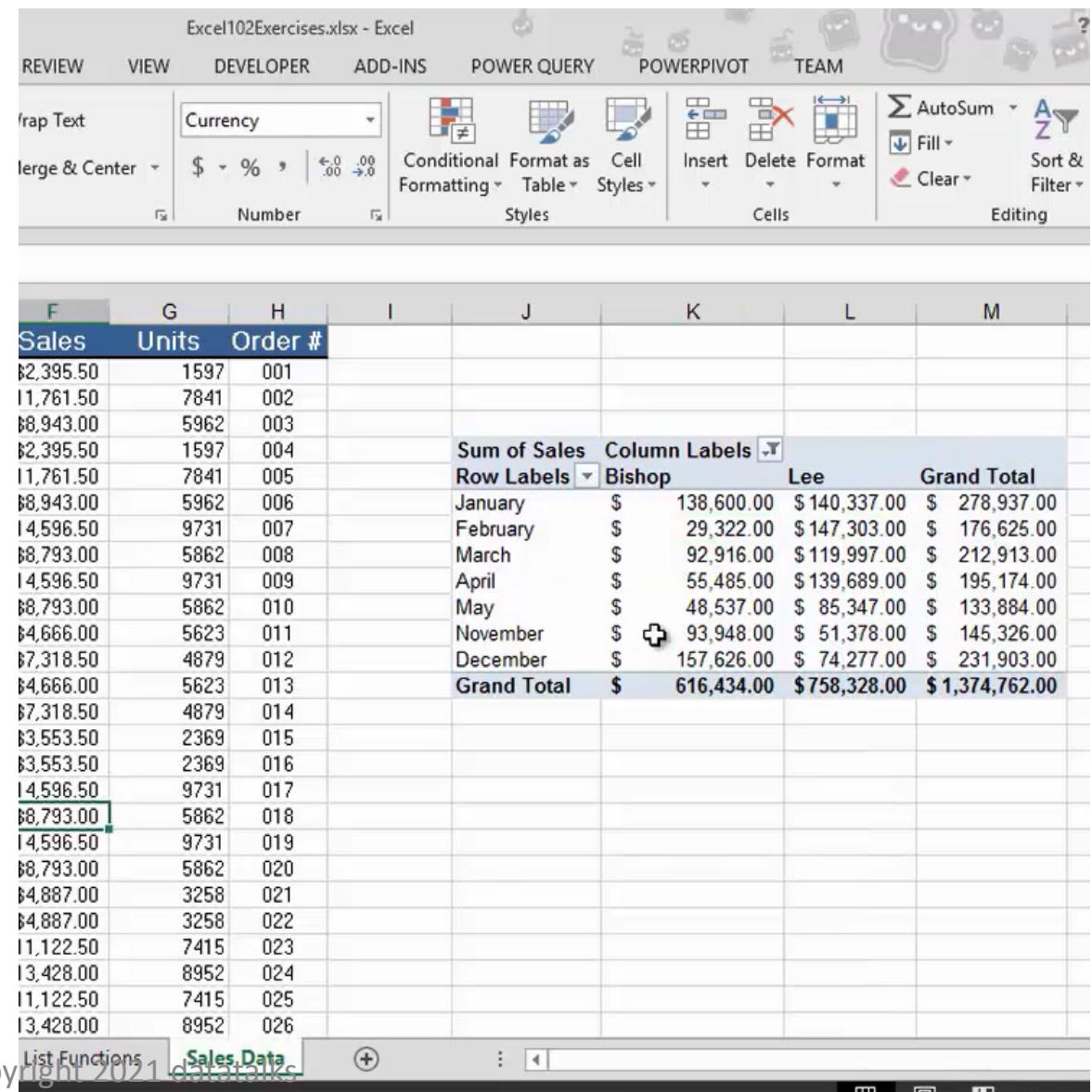
## 3) Exporting data to a text.



# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 1) Understanding excel pivotables.



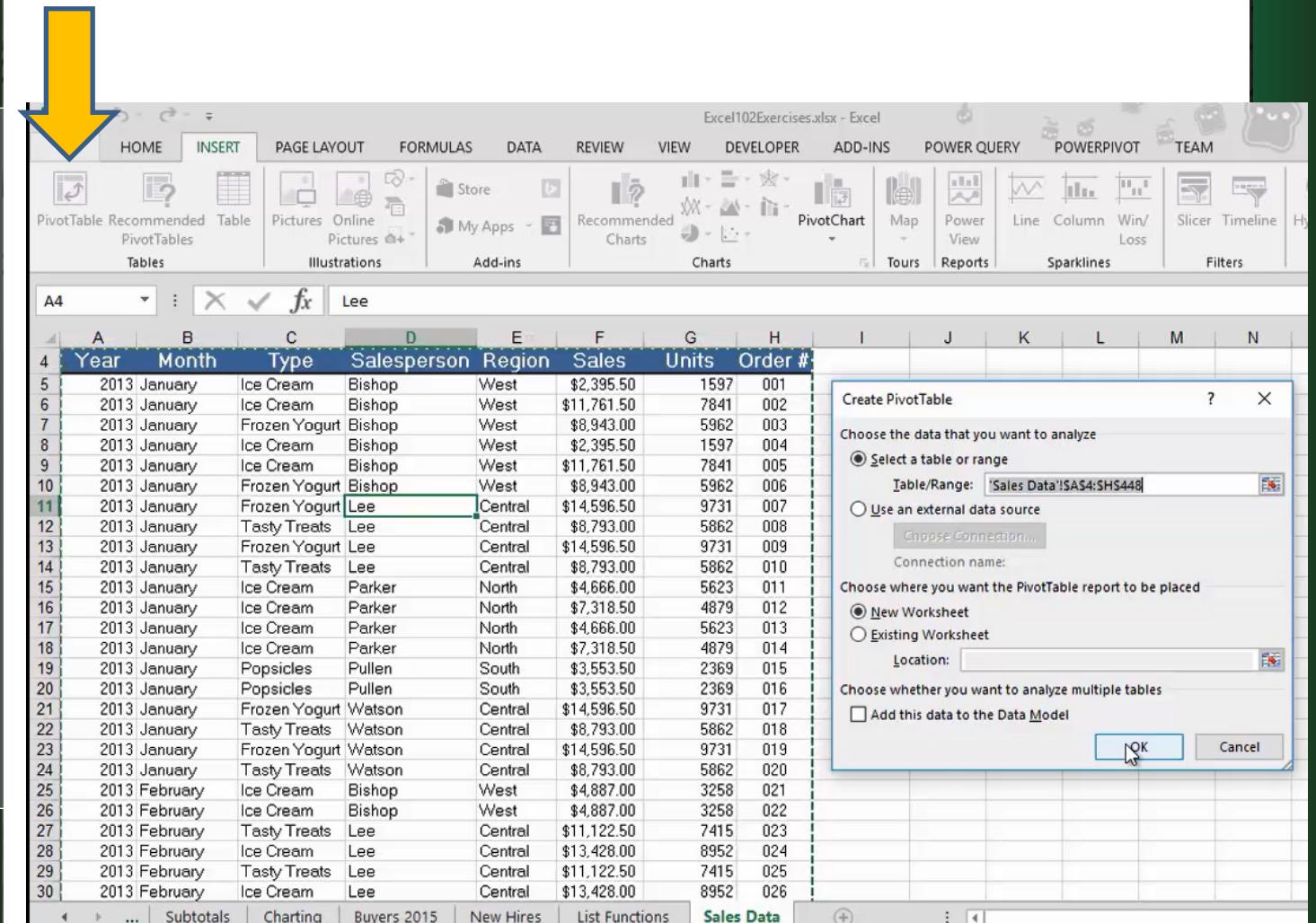
The screenshot shows a Microsoft Excel interface with the ribbon menu open. The active tab is 'POWERPIVOT'. Below the ribbon, there's a toolbar with various icons for data manipulation. The main area displays a pivot table. The data source is labeled 'Sales Data' at the bottom left. The pivot table has 'Sum of Sales' as the value field, 'Row Labels' set to 'Bishop' and 'Lee', and 'Column Labels' set to 'January' through 'December'. The 'Grand Total' row shows a total of \$1,374,762.00. The data grid contains sales figures for different months and employees. The bottom right corner of the slide has the number '59'.

Sales	Units	Order #										
\$2,395.50	1597	001										
\$1,761.50	7841	002										
\$8,943.00	5962	003										
\$2,395.50	1597	004										
\$1,761.50	7841	005										
\$8,943.00	5962	006										
\$14,596.50	9731	007										
\$8,793.00	5862	008										
\$14,596.50	9731	009										
\$8,793.00	5862	010										
\$4,666.00	5623	011										
\$7,318.50	4879	012										
\$4,666.00	5623	013										
\$7,318.50	4879	014										
\$3,553.50	2369	015										
\$3,553.50	2369	016										
\$14,596.50	9731	017										
\$8,793.00	5862	018										
\$14,596.50	9731	019										
\$8,793.00	5862	020										
\$4,887.00	3258	021										
\$4,887.00	3258	022										
\$11,122.50	7415	023										
\$13,428.00	8952	024										
\$11,122.50	7415	025										
\$13,428.00	8952	026										

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Creating an excel pivotable.



The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx". The data is organized into a table with columns: Year, Month, Type, Salesperson, Region, Sales, Units, and Order #. A yellow arrow points to the "PivotTable" icon in the "Insert" tab of the ribbon. A "Create PivotTable" dialog box is displayed, prompting the user to select a table or range (which is set to "Sales Data!\$A\$4:\$H\$448") and choose where to place the report (set to "New Worksheet").

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4	Year	Month	Type	Salesperson	Region	Sales	Units	Order #						
5	2013	January	Ice Cream	Bishop	West	\$2,395.50	1597	001						
6	2013	January	Ice Cream	Bishop	West	\$11,761.50	7841	002						
7	2013	January	Frozen Yogurt	Bishop	West	\$8,943.00	5962	003						
8	2013	January	Ice Cream	Bishop	West	\$2,395.50	1597	004						
9	2013	January	Ice Cream	Bishop	West	\$11,761.50	7841	005						
10	2013	January	Frozen Yogurt	Bishop	West	\$8,943.00	5962	006						
11	2013	January	Frozen Yogurt	Lee	Central	\$14,596.50	9731	007						
12	2013	January	Tasty Treats	Lee	Central	\$8,793.00	5862	008						
13	2013	January	Frozen Yogurt	Lee	Central	\$14,596.50	9731	009						
14	2013	January	Tasty Treats	Lee	Central	\$8,793.00	5862	010						
15	2013	January	Ice Cream	Parker	North	\$4,666.00	5623	011						
16	2013	January	Ice Cream	Parker	North	\$7,318.50	4879	012						
17	2013	January	Ice Cream	Parker	North	\$4,666.00	5623	013						
18	2013	January	Ice Cream	Parker	North	\$7,318.50	4879	014						
19	2013	January	Popsicles	Pullen	South	\$3,553.50	2369	015						
20	2013	January	Popsicles	Pullen	South	\$3,553.50	2369	016						
21	2013	January	Frozen Yogurt	Watson	Central	\$14,596.50	9731	017						
22	2013	January	Tasty Treats	Watson	Central	\$8,793.00	5862	018						
23	2013	January	Frozen Yogurt	Watson	Central	\$14,596.50	9731	019						
24	2013	January	Tasty Treats	Watson	Central	\$8,793.00	5862	020						
25	2013	February	Ice Cream	Bishop	West	\$4,887.00	3258	021						
26	2013	February	Ice Cream	Bishop	West	\$4,887.00	3258	022						
27	2013	February	Tasty Treats	Lee	Central	\$11,122.50	7415	023						
28	2013	February	Ice Cream	Lee	Central	\$13,428.00	8952	024						
29	2013	February	Tasty Treats	Lee	Central	\$11,122.50	7415	025						
30	2013	February	Ice Cream	Lee	Central	\$13,428.00	8952	026						

## Excel 102 Topic

1. Working with Excel list
  2. Excel list functions
  3. Excel data validation
  4. Importing & Exporting data
  5. Excel pivottables
  6. Working with excel powerpivot tools
  7. Working with large sets of excel data



# 3) Modifying excel pivottables calculation

The screenshot shows a Microsoft Excel spreadsheet with a PivotTable in the center. The PivotTable has 'Month' in the Row Labels and 'Sales' in the Values area. The values are summarized as 'Sum of Sales'. A 'Value Field Settings' dialog box is open over the PivotTable, showing the following settings:

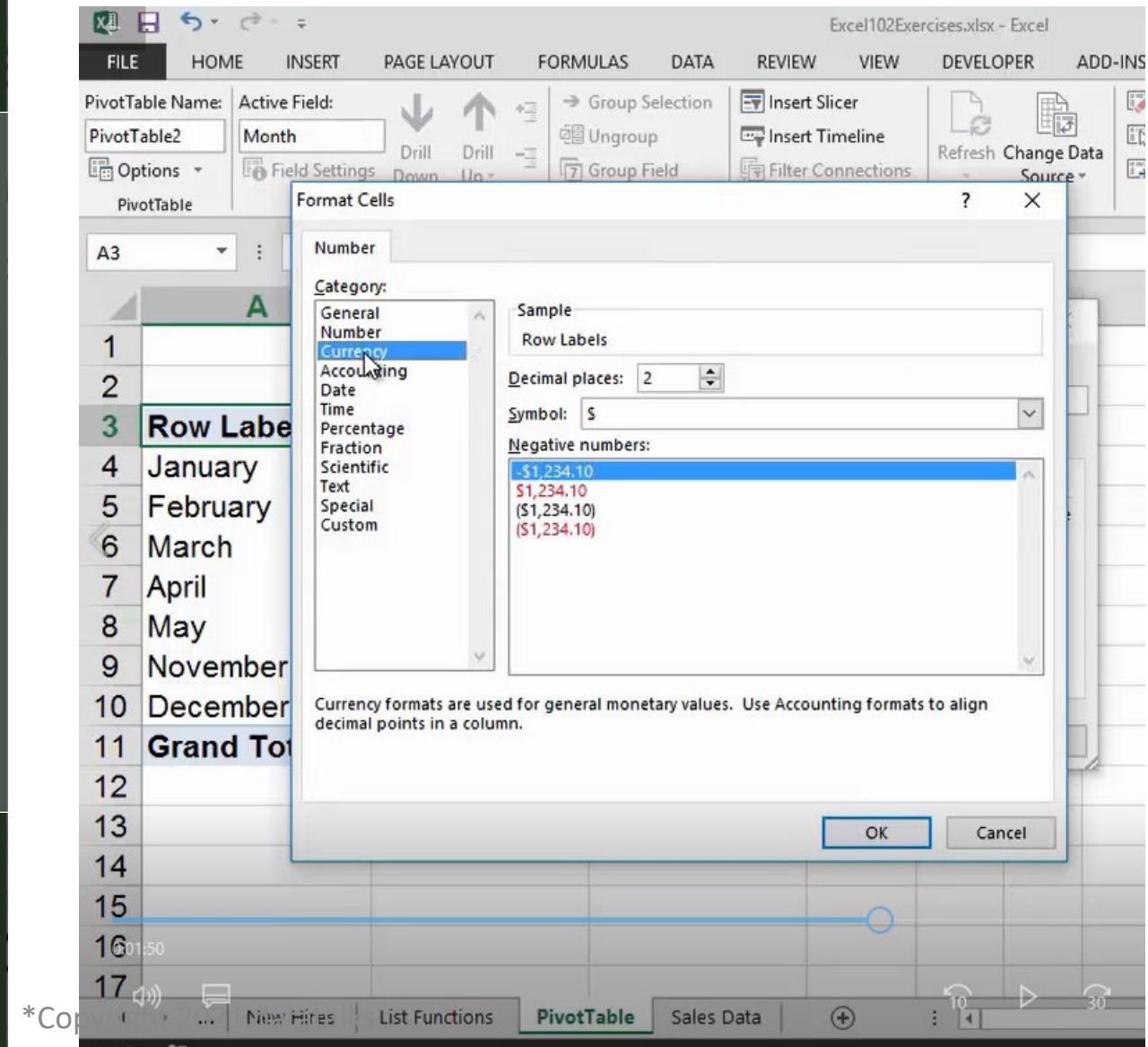
- Source Name: Sales
- Custom Name: Sum of Sales
- Show values as: % Difference From
- Base field: Month
- Base item: (previous)

The 'OK' button is highlighted with a mouse cursor. To the right of the PivotTable, the 'PivotTable Fields' pane is open, listing fields: Month, Type, Salesperson, Region, Sales, Units, and Order #. The 'Month' field is selected. Below the fields, there are sections for 'FILTERS', 'ROWS', and 'VALUES'.

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

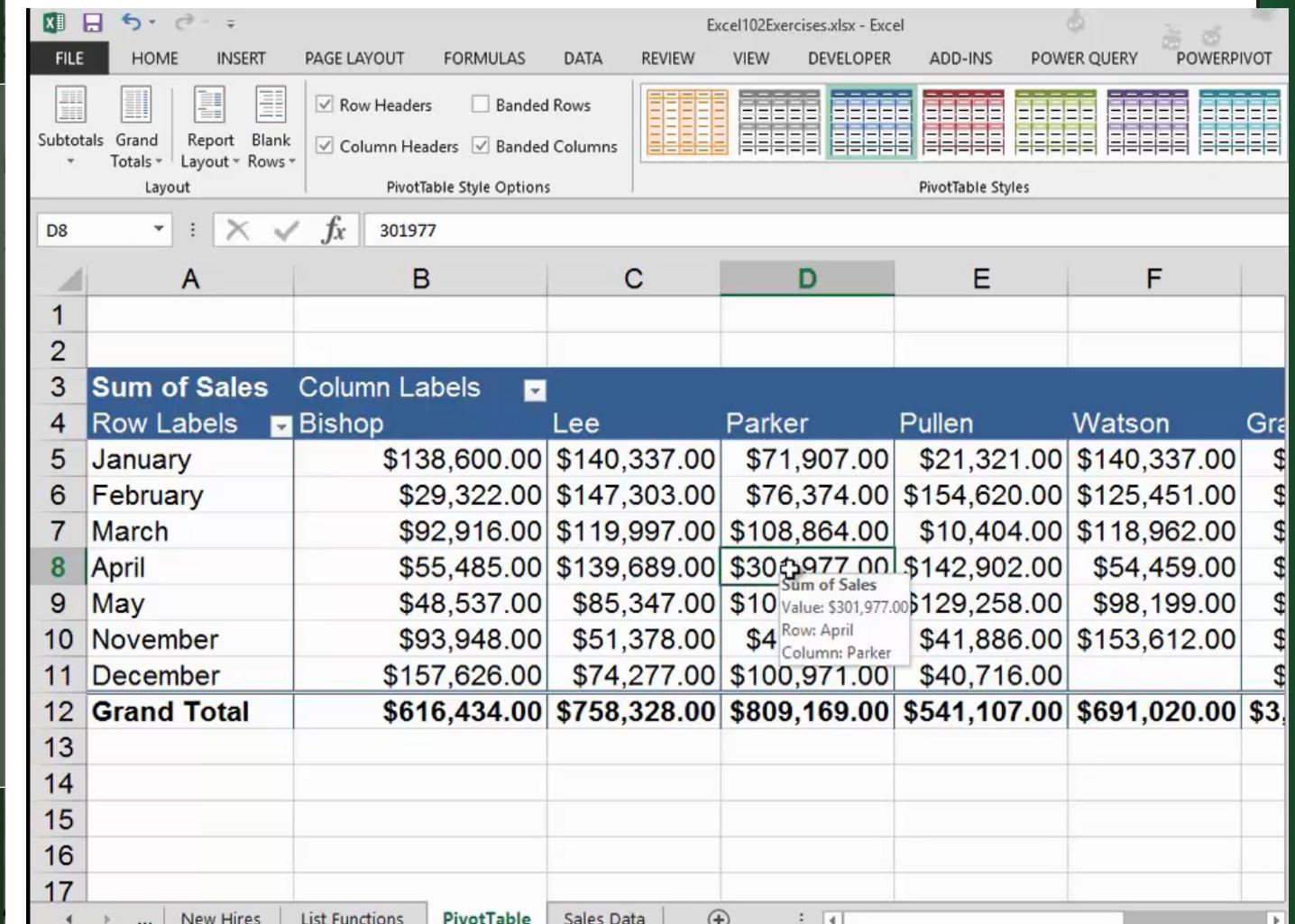
### 4) Formatting pivotable data.



## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 5) Drilling down into pivotables data



	A	B	C	D	E	F
1						
2						
3	Sum of Sales	Column Labels				
4	Row Labels	Bishop	Lee	Parker	Pullen	Watson
5	January	\$138,600.00	\$140,337.00	\$71,907.00	\$21,321.00	\$140,337.00
6	February	\$29,322.00	\$147,303.00	\$76,374.00	\$154,620.00	\$125,451.00
7	March	\$92,916.00	\$119,997.00	\$108,864.00	\$10,404.00	\$118,962.00
8	April	\$55,485.00	\$139,689.00	\$301,977.00	\$142,902.00	\$54,459.00
9	May	\$48,537.00	\$85,347.00	\$10,129.258.00	\$129,258.00	\$98,199.00
10	November	\$93,948.00	\$51,378.00	\$4,41,886.00	\$41,886.00	\$153,612.00
11	December	\$157,626.00	\$74,277.00	\$100,971.00	\$40,716.00	
12	Grand Total	\$616,434.00	\$758,328.00	\$809,169.00	\$541,107.00	\$691,020.00
13						
14						
15						
16						
17						

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



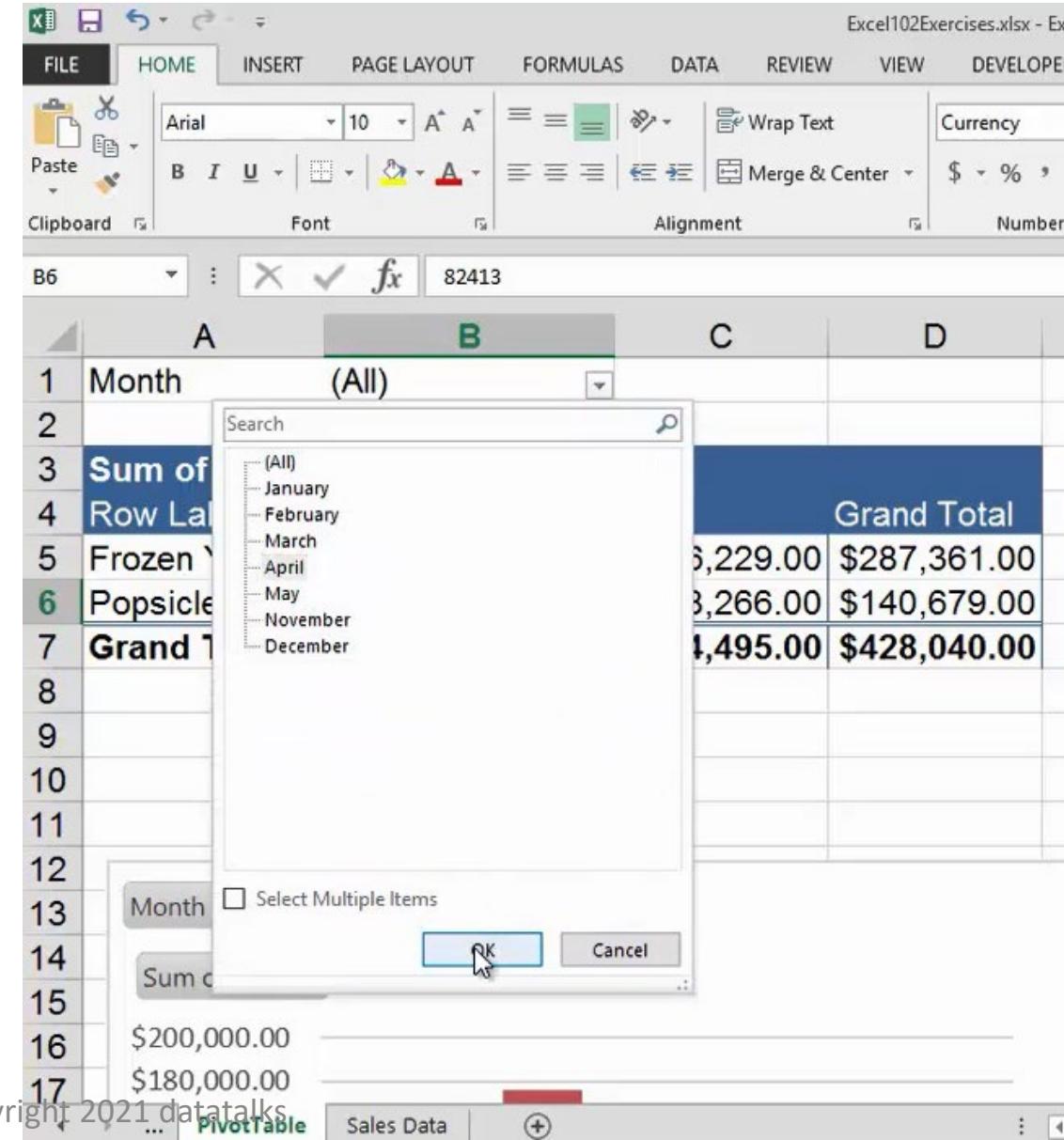
## 6) Creating pivotcharts

The screenshot shows the Microsoft Excel interface with the ribbon at the top. The 'ANALYZE' tab is highlighted with a yellow arrow pointing to it. A 'PivotTable Fields' pane is open on the right side, listing fields like Salesperson, Region, Sales, Units, Order #, and Qtr 2Month2. Below the ribbon, the 'Insert Chart' dialog is displayed, showing various chart types like Clustered Column, Line, and Pie. A clustered column chart is selected. The background of the slide shows a portion of an Excel spreadsheet with columns labeled 'Month' and 'Salesperson' and rows of numerical data.

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

### 7) Filtering pivotables data



The screenshot shows a Microsoft Excel interface with the ribbon menu at the top. The active tab is 'HOME'. The status bar indicates the file is 'Excel102Exercises.xlsx' and the current cell is 'B6'. A PivotTable is displayed in the main area, showing sales data by month. A filter dialog box is open over the table, specifically for the 'Month' field. The dialog lists months from January to December, with 'January' selected. Other visible options include 'Select Multiple Items' and buttons for 'OK' and 'Cancel'. The PivotTable itself shows a summary of sales for each month, with a 'Grand Total' row at the bottom.

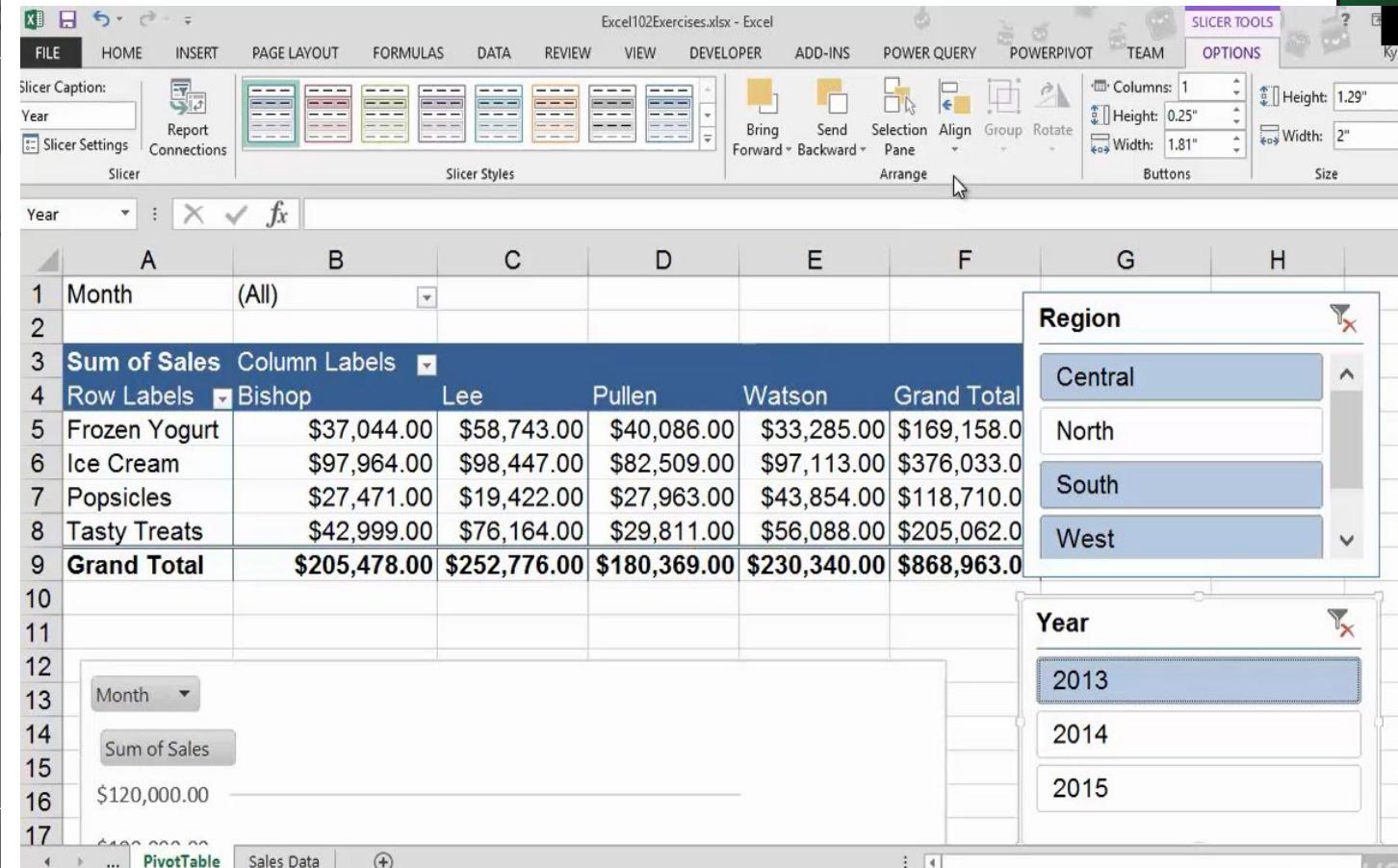
Month	Sum of Sales	Sum of Profit
(All)		
January	\$3,229.00	\$287,361.00
February	\$3,266.00	\$140,679.00
March		
April		
May		
November		
December		
<b>Grand Total</b>	<b>\$1,495.00</b>	<b>\$428,040.00</b>

\*Copyright 2021 datatalks

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 8) Filtering with the slicer tool



The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". A PivotTable is displayed in the center of the screen, showing sales data for four categories: Frozen Yogurt, Ice Cream, Popsicles, and Tasty Treats, broken down by three salespeople: Bishop, Lee, and Pullen, and grouped by Region (Central, North, South, West). The PivotTable includes a Grand Total row.

Three Slicers are present on the right side of the PivotTable:

- A "Month" slicer with options for "Month" (dropdown), "Sum of Sales" (button), and a value of "\$120,000.00" (text input).
- A "Region" slicer with options for "Central", "North", "South", and "West".
- A "Year" slicer with options for "2013", "2014", and "2015".

The Excel ribbon at the top shows the "Slicer Tools" tab is selected. The "Slicer Styles" group is visible, and the "Arrange" button is highlighted in the "Layout" tab.

	A	B	C	D	E	F	G	H
1	Month	(All)						
2								
3	Sum of Sales	Column Labels						
4	Row Labels	Bishop	Lee	Pullen	Watson	Grand Total		
5	Frozen Yogurt	\$37,044.00	\$58,743.00	\$40,086.00	\$33,285.00	\$169,158.0		
6	Ice Cream	\$97,964.00	\$98,447.00	\$82,509.00	\$97,113.00	\$376,033.0		
7	Popsicles	\$27,471.00	\$19,422.00	\$27,963.00	\$43,854.00	\$118,710.0		
8	Tasty Treats	\$42,999.00	\$76,164.00	\$29,811.00	\$56,088.00	\$205,062.0		
9	Grand Total	\$205,478.00	\$252,776.00	\$180,369.00	\$230,340.00	\$868,963.0		
10								
11								
12								
13	Month							
14	Sum of Sales							
15	\$120,000.00							
16								
17								

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 1) Why Powerpivot

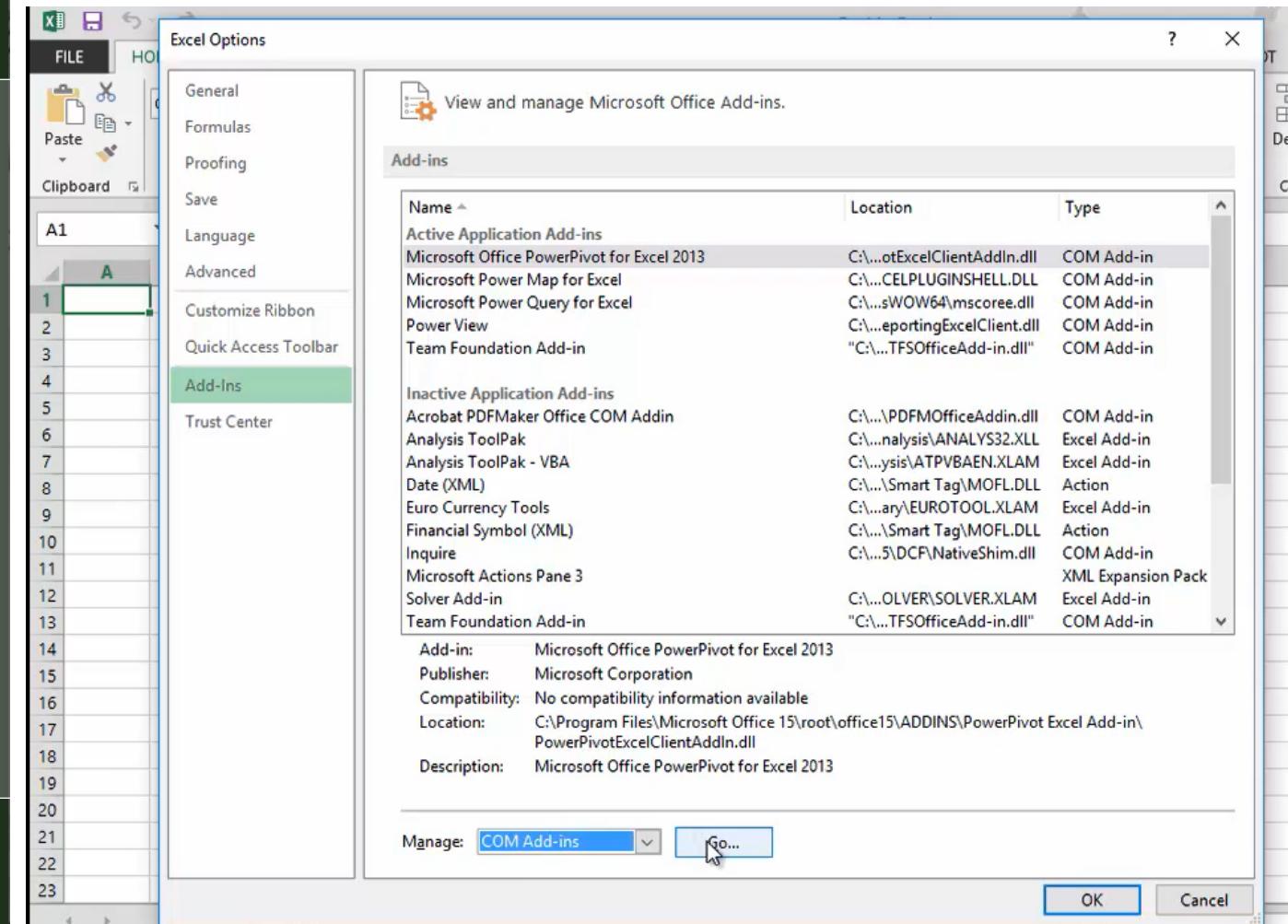
A screenshot of Microsoft Excel showing the creation of a new PivotTable. The ribbon is visible at the top with the 'POWERPIVOT' tab selected. A 'Create a New PivotTable' dialog box is open in the center, asking if the user wants to create a new PivotTable. The background shows a worksheet with a PivotTable named 'PivotTable4' and various fields listed in the 'PivotTable Fields' pane on the right.

\*Copyright 2021 datatalks

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Activating the excel powerpivot addin



# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 3) Creating data models with powerpivot

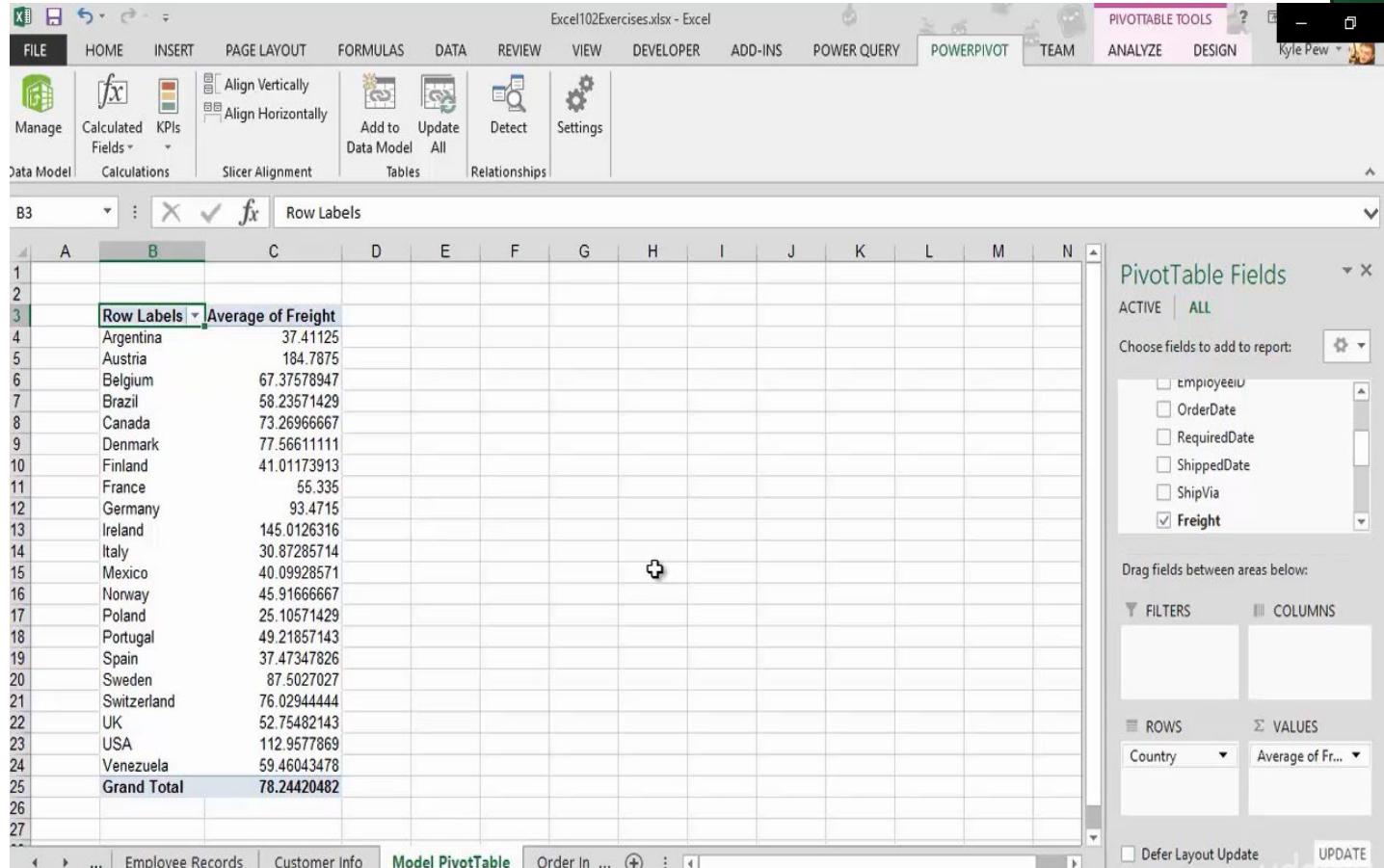
The screenshot shows a Microsoft Excel window titled "Excel102Exercises.xlsx - Excel". The ribbon is visible at the top, with the "POWERPIVOT" tab selected. A yellow arrow points to the "Update All" button in the "Tables" group of the ribbon. Below the ribbon, a data grid displays customer information from the Northwind database. In the bottom right corner of the Excel window, the PowerPivot ribbon tab is also visible, showing various data modeling tools like Paste Append, Refresh, PivotTable, and PivotChart. At the bottom of the Excel window, a "Relationships" pane displays a data model diagram. The diagram shows two tables: "CustomerInfo" and "OrderInfo". "CustomerInfo" contains fields such as CustomerID, CompanyName, ContactName, ContactTitle, Address, City, Region, PostalCode, Country, Phone, and Fax. "OrderInfo" contains fields such as OrderID, CustomerID, EmployeeID, OrderDate, RequiredDate, ShippedDate, ShipVia, Freight, ShipName, ShipAddress, ShipCity, ShipRegion, ShipPostalCode, and ShipCountry. A relationship line connects CustomerID in "CustomerInfo" to CustomerID in "OrderInfo". The entire PowerPivot interface is overlaid on the bottom right of the Excel window.

\*Copyright 2021 datatalks

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 4) Creating pivottables based on data models



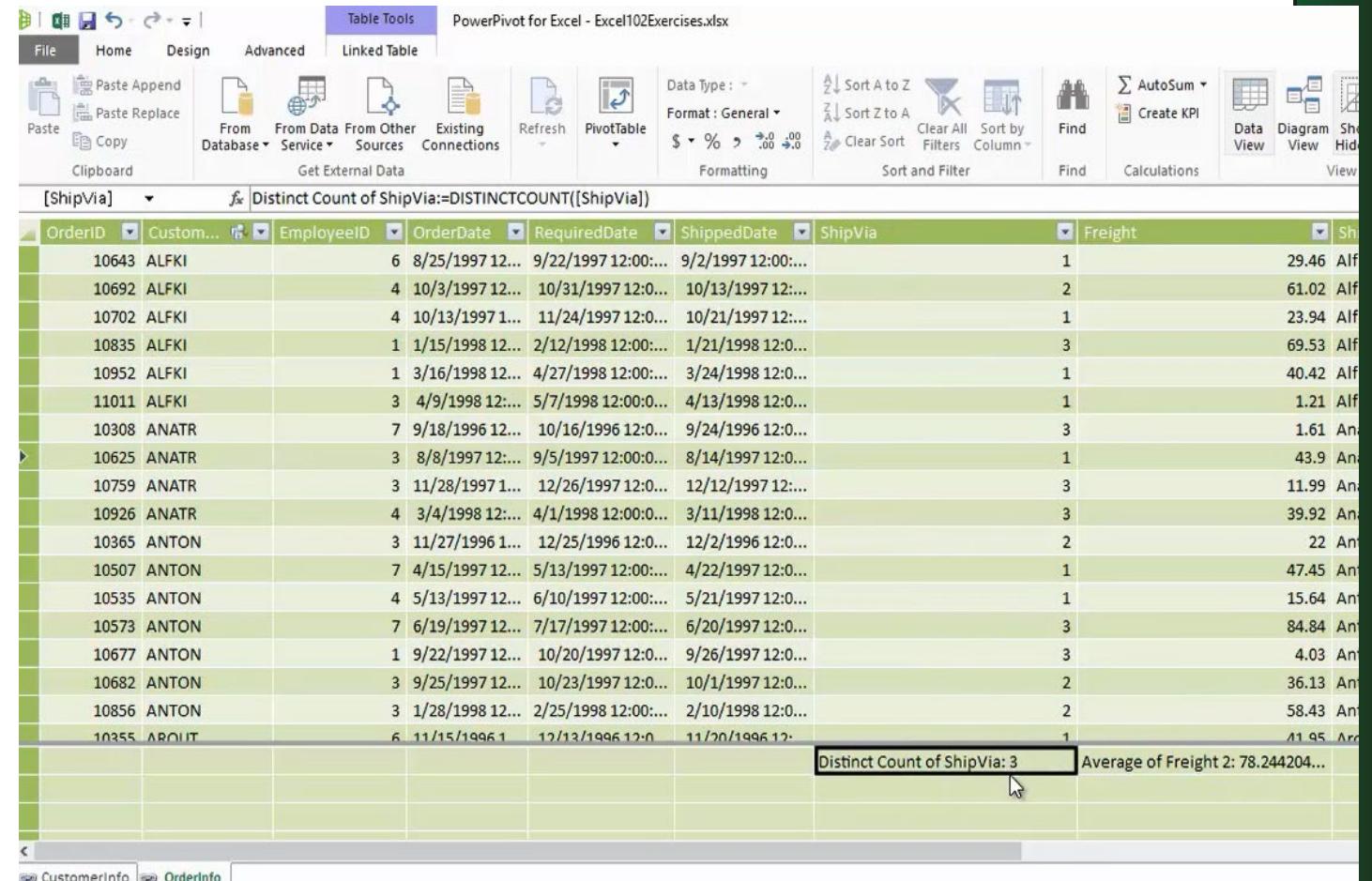
The screenshot shows a Microsoft Excel spreadsheet titled "Excel102Exercises.xlsx - Excel". The ribbon menu is visible at the top, with the "PIVOTABLE TOOLS" tab selected. In the center, there is a PivotTable containing data from columns A and B. The PivotTable Fields pane on the right side of the screen allows for dragging fields between areas like Rows, Columns, and Values. The "ROWS" section contains "Country", and the "VALUES" section contains "Freight" with the formula "Average of Fr...". The main data area shows the following table:

Country	Average of Freight
Argentina	37.41125
Austria	184.7875
Belgium	67.37578947
Brazil	58.23571429
Canada	73.26966667
Denmark	77.56611111
Finland	41.01173913
France	55.335
Germany	93.4715
Ireland	145.0126316
Italy	30.87285714
Mexico	40.09928571
Norway	45.91666667
Poland	25.10571429
Portugal	49.21857143
Spain	37.47347826
Sweden	87.5027027
Switzerland	76.02944444
UK	52.75482143
USA	112.9577869
Venezuela	59.46043478
<b>Grand Total</b>	<b>78.24420482</b>

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 5) Powerpivot calculated fields

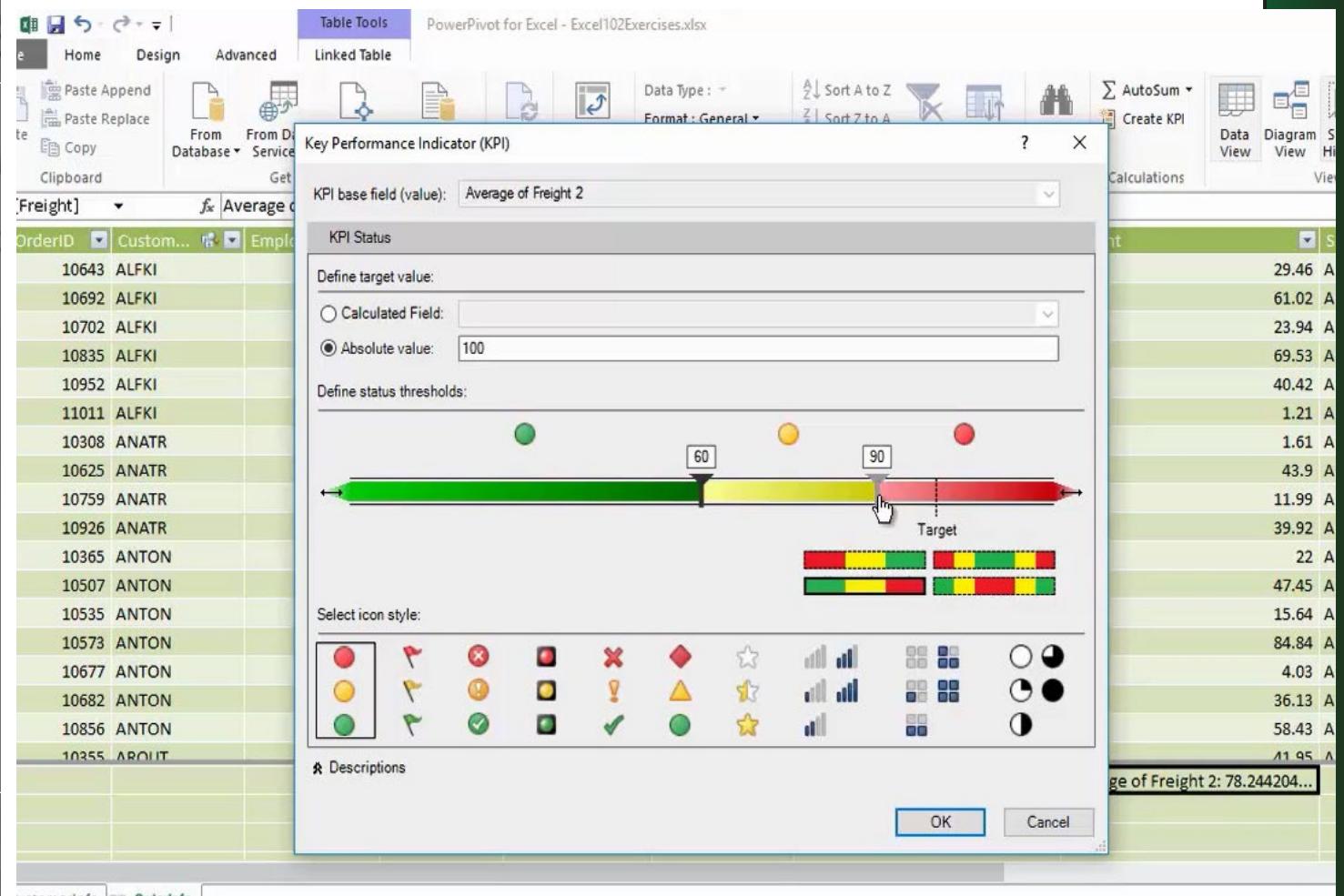


OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate	ShippedDate	ShipVia	Freight
10643	ALFKI	6	8/25/1997 12:00:00	9/22/1997 12:00:00	9/2/1997 12:00:00	1	29.46
10692	ALFKI	4	10/3/1997 12:00:00	10/31/1997 12:00:00	10/13/1997 12:00:00	2	61.02
10702	ALFKI	4	10/13/1997 12:00:00	11/24/1997 12:00:00	10/21/1997 12:00:00	1	23.94
10835	ALFKI	1	1/15/1998 12:00:00	2/12/1998 12:00:00	1/21/1998 12:00:00	3	69.53
10952	ALFKI	1	3/16/1998 12:00:00	4/27/1998 12:00:00	3/24/1998 12:00:00	1	40.42
11011	ALFKI	3	4/9/1998 12:00:00	5/7/1998 12:00:00	4/13/1998 12:00:00	1	1.21
10308	ANATR	7	9/18/1996 12:00:00	10/16/1996 12:00:00	9/24/1996 12:00:00	3	1.61
10625	ANATR	3	8/8/1997 12:00:00	9/5/1997 12:00:00	8/14/1997 12:00:00	1	43.9
10759	ANATR	3	11/28/1997 12:00:00	12/26/1997 12:00:00	12/12/1997 12:00:00	3	11.99
10926	ANATR	4	3/4/1998 12:00:00	4/1/1998 12:00:00	3/11/1998 12:00:00	3	39.92
10365	ANTON	3	11/27/1996 12:00:00	12/25/1996 12:00:00	12/2/1996 12:00:00	2	22
10507	ANTON	7	4/15/1997 12:00:00	5/13/1997 12:00:00	4/22/1997 12:00:00	1	47.45
10535	ANTON	4	5/13/1997 12:00:00	6/10/1997 12:00:00	5/21/1997 12:00:00	1	15.64
10573	ANTON	7	6/19/1997 12:00:00	7/17/1997 12:00:00	6/20/1997 12:00:00	3	84.84
10677	ANTON	1	9/22/1997 12:00:00	10/20/1997 12:00:00	9/26/1997 12:00:00	3	4.03
10682	ANTON	3	9/25/1997 12:00:00	10/23/1997 12:00:00	10/1/1997 12:00:00	2	36.13
10856	ANTON	3	1/28/1998 12:00:00	2/25/1998 12:00:00	2/10/1998 12:00:00	2	58.43
10355	AROUT	6	11/15/1996 12:00:00	12/13/1996 12:00:00	11/20/1996 12:00:00	1	11.95

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

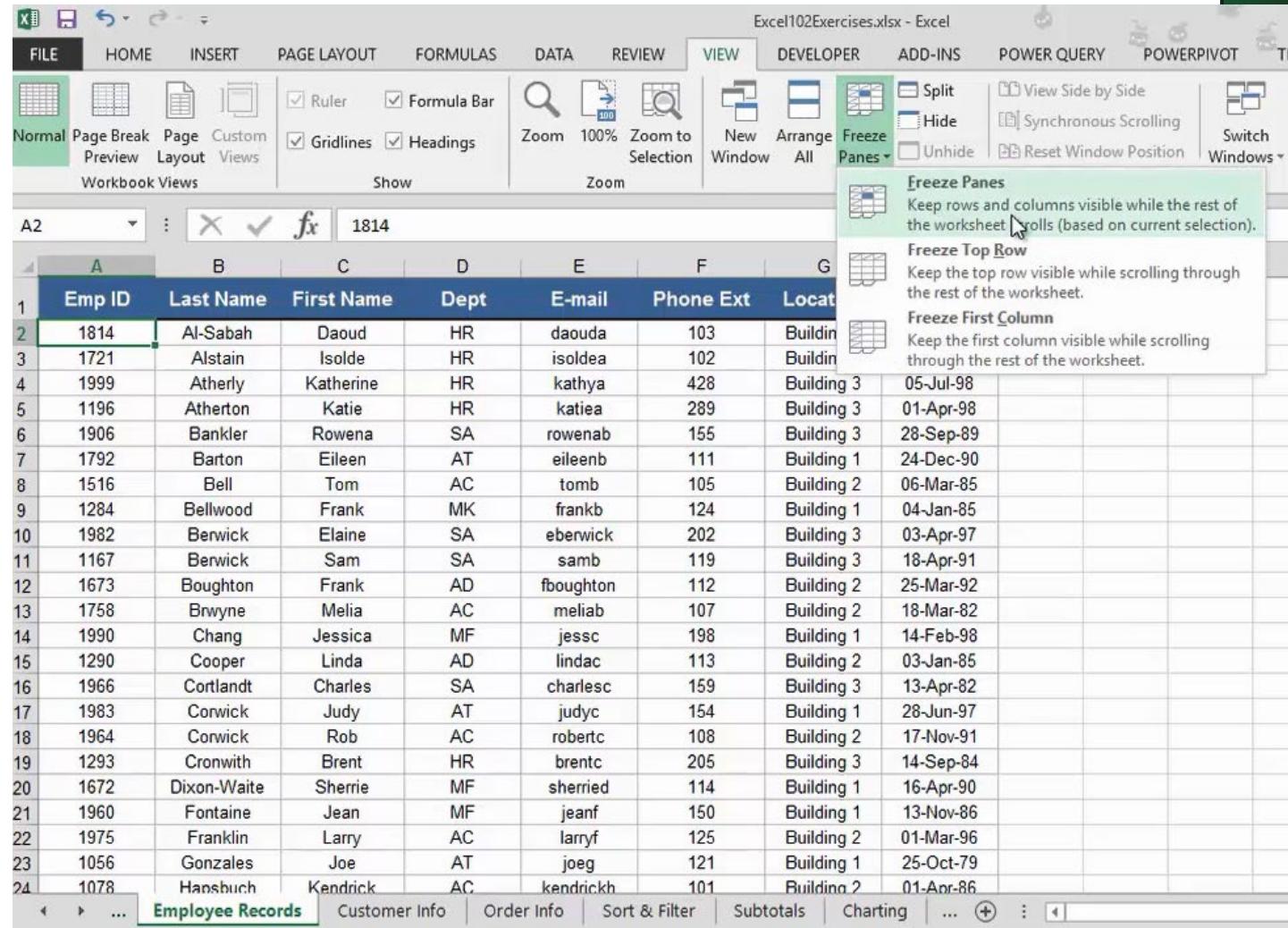
## 6) Powerpivot kpis



# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 1) Using the freeze pane tool



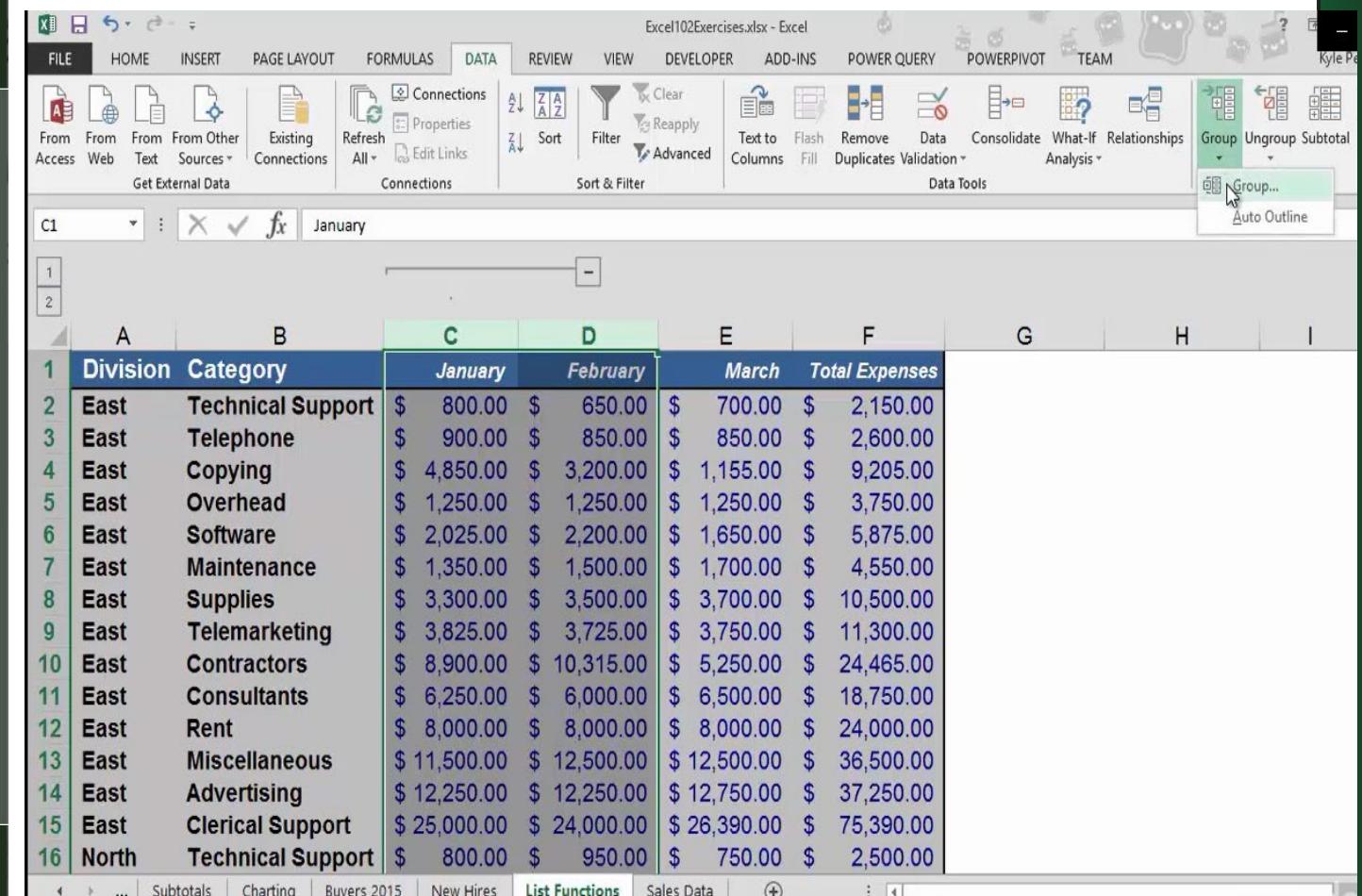
The screenshot shows the Microsoft Excel interface with the ribbon menu open. The 'VIEW' tab is selected, highlighting the 'Freeze Panes' button. A tooltip for 'Freeze Panes' is displayed, explaining that it keeps rows and columns visible while the rest of the worksheet scrolls. Below the ribbon, a data table titled 'Employee Records' is shown. The first row contains column headers: Emp ID, Last Name, First Name, Dept, E-mail, Phone Ext, and Locat. The second row contains data: 1814, Al-Sabah, Daoud, HR, daouda, 103, Building 1. The table has 24 rows of data. The bottom of the screen shows several tabs: Employee Records (selected), Customer Info, Order Info, Sort & Filter, Subtotals, Charting, and others.

	Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Locat
1	1814	Al-Sabah	Daoud	HR	daouda	103	Building 1
2	1721	Alstain	Isolde	HR	isoldea	102	Building 1
3	1999	Atherly	Katherine	HR	kathya	428	Building 3
4	1196	Atherton	Katie	HR	katiea	289	Building 3
5	1906	Bankler	Rowena	SA	rowenab	155	Building 3
6	1792	Barton	Eileen	AT	eileenb	111	Building 1
7	1516	Bell	Tom	AC	tomb	105	Building 2
8	1284	Bellwood	Frank	MK	frankb	124	Building 1
9	1982	Berwick	Elaine	SA	eberwick	202	Building 3
10	1167	Berwick	Sam	SA	samb	119	Building 3
11	1673	Boughton	Frank	AD	fboughton	112	Building 2
12	1758	Brwyne	Melia	AC	meliab	107	Building 2
13	1990	Chang	Jessica	MF	jessc	198	Building 1
14	1290	Cooper	Linda	AD	lindac	113	Building 2
15	1966	Cortlandt	Charles	SA	charlesc	159	Building 3
16	1983	Corwick	Judy	AT	judyc	154	Building 1
17	1964	Corwick	Rob	AC	robertc	108	Building 2
18	1293	Cronwith	Brent	HR	brentc	205	Building 3
19	1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1
20	1960	Fontaine	Jean	MF	jeanf	150	Building 1
21	1975	Franklin	Larry	AC	larryf	125	Building 2
22	1056	Gonzales	Joe	AT	joeg	121	Building 1
23	1078	Hanshuh	Kendrick	AC	kendrickkh	101	Building 2
24							01-Apr-86

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 2) Grouping data column and or rows



The screenshot shows a Microsoft Excel window titled "Excel102Exercises.xlsx - Excel". The ribbon is visible at the top with the "DATA" tab selected. In the "Data Tools" section of the ribbon, the "Group" button is highlighted. Below the ribbon, a table is displayed with data grouped by division and category. The columns are labeled A through F, and the rows are numbered 1 through 16. The table includes a header row and a summary row for "Total Expenses".

	A	B	C	D	E	F	G	H	I
1	Division	Category	January	February	March	Total Expenses			
2	East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00			
3	East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00			
4	East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00			
5	East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00			
6	East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00			
7	East	Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00			
8	East	Supplies	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00	\$ 10,500.00			
9	East	Telemarketing	\$ 3,825.00	\$ 3,725.00	\$ 3,750.00	\$ 11,300.00			
10	East	Contractors	\$ 8,900.00	\$ 10,315.00	\$ 5,250.00	\$ 24,465.00			
11	East	Consultants	\$ 6,250.00	\$ 6,000.00	\$ 6,500.00	\$ 18,750.00			
12	East	Rent	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 24,000.00			
13	East	Miscellaneous	\$ 11,500.00	\$ 12,500.00	\$ 12,500.00	\$ 36,500.00			
14	East	Advertising	\$ 12,250.00	\$ 12,250.00	\$ 12,750.00	\$ 37,250.00			
15	East	Clerical Support	\$ 25,000.00	\$ 24,000.00	\$ 26,390.00	\$ 75,390.00			
16	North	Technical Support	\$ 800.00	\$ 950.00	\$ 750.00	\$ 2,500.00			

# Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivottables
6. Working with excel powerpivot tools
7. Working with large sets of excel data



## 3) Print option for large sets of data

The screenshot shows a Microsoft Excel spreadsheet titled "2013" with columns labeled "Year" and "Month". The "Page Layout" tab is selected in the ribbon. A yellow arrow points from the "Page Layout" tab to the "Page Setup" dialog box, which is open over the spreadsheet. The "Page Setup" dialog has several tabs: "Page", "Margins", "Header/Footer", and "Sheet". The "Sheet" tab is active, showing settings for "Print area" (\$4:\$4), "Print titles" (Rows to repeat at top: \$4:\$4), and "Print" options like "Gridlines" (checked). Another yellow arrow points from the "Sheet" tab to the "Page" tab of the dialog box, where the "Page order" section is highlighted, showing the radio button for "Over, then down" is selected. The bottom right of the dialog box contains buttons for "Print...", "Print Preview", and "OK".

\*Copyright 2021 datatalks

## Excel 102 Topic

1. Working with Excel list
  2. Excel list functions
  3. Excel data validation
  4. Importing & Exporting data
  5. Excel pivottables
  6. Working with excel powerpivot tools
  7. Working with large sets of excel data



## 4) Linking worksheet 3d formulas

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER

Themes Colors Fonts Effects Margins Orientation Size Print Area Breaks Background Print Titles Width: Automatic Height: Automatic Scale: 100% Scale to Fit

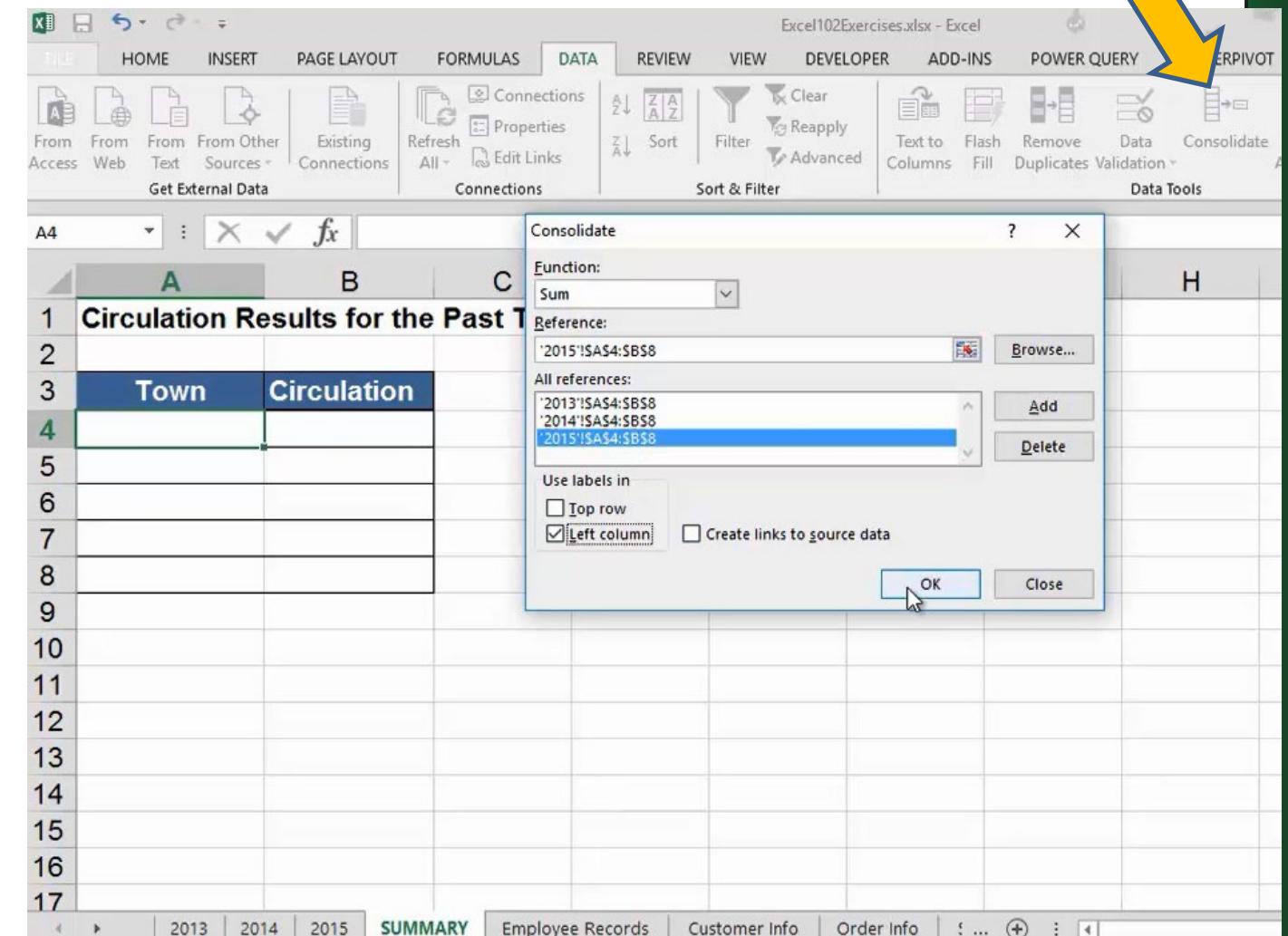
B4 : X ✓ fx ='2013'!B4+'2014'!B4+'2015'!B4

	A	B	C	D	E		
1	<b>Circulation Results for the Past Three Years</b>						
2							
3	Town	Circulation					
4	<b>Beverly</b>	='2013'!B4+'2014'!B4+'2015'!B4					
5	<b>Cherrydale</b>						
6	<b>Jamestown</b>						
7	<b>Larksburg</b>						
8	<b>Washerville</b>						
9							
10							
11							
12							
13							
14							
15							
16							
17	copyright 2021 datatalks						
	2013	2014	2015	SUMMARY	Employee Records	Customer Info	Order

## Excel 102 Topic

1. Working with Excel list
2. Excel list functions
3. Excel data validation
4. Importing & Exporting data
5. Excel pivotables
6. Working with excel powerpivot tools
7. Working with large sets of excel data

## 5) Consolidating data from multiple worksheet



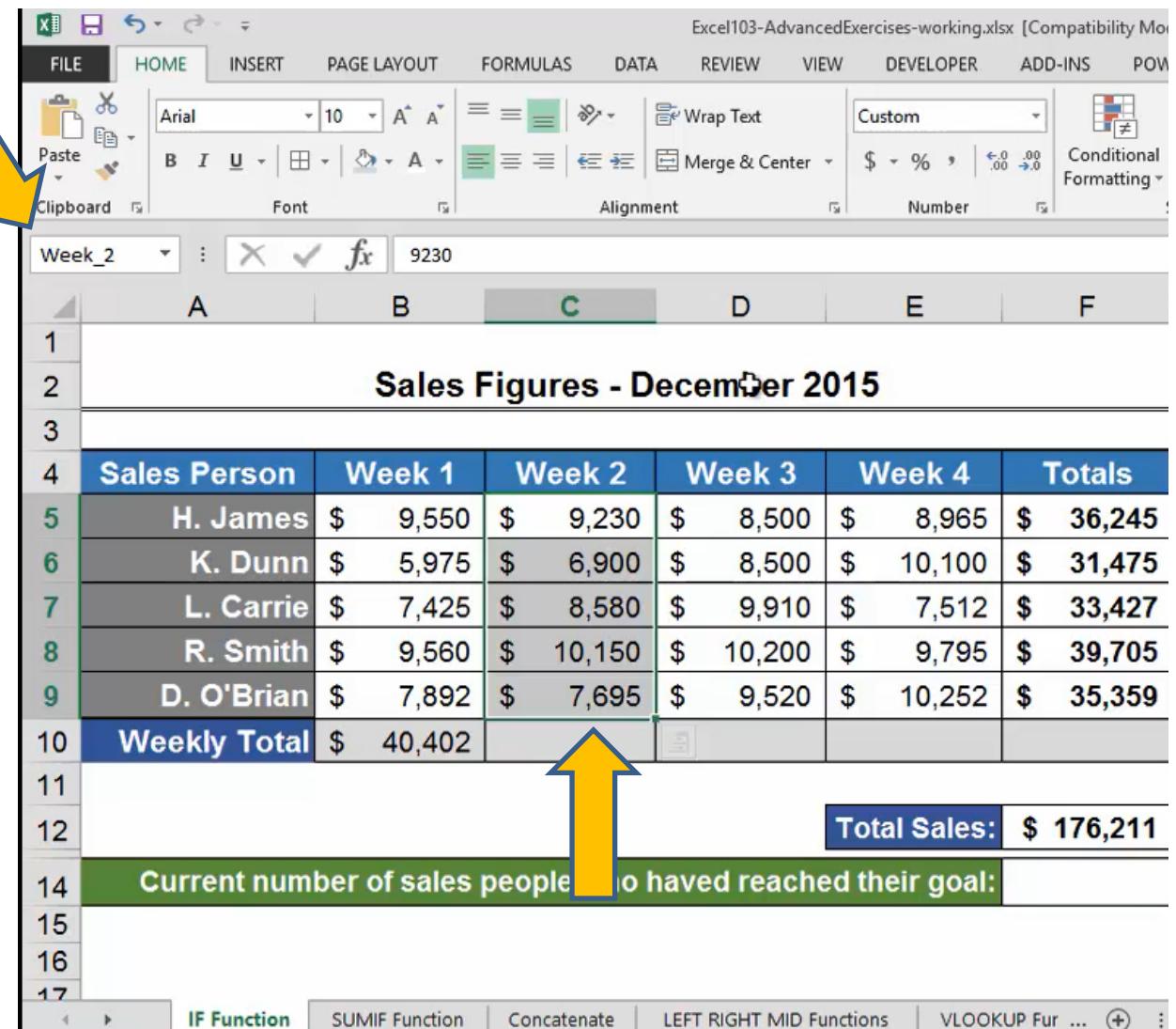
The screenshot shows a Microsoft Excel window with the ribbon at the top. The 'DATA' tab is selected. A yellow arrow points to the 'Consolidate' button in the 'Data Tools' group of the ribbon. A 'Consolidate' dialog box is open over the spreadsheet. The dialog box has 'Function: Sum' selected in the 'Function' dropdown. The 'Reference:' dropdown contains three entries: '2013!\$A\$4:\$B\$8', '2014!\$A\$4:\$B\$8', and '2015!\$A\$4:\$B\$8', with the last one highlighted. The 'All references:' list also shows these three entries. The 'Use labels in' section has 'Left column' checked. At the bottom right of the dialog box, there are 'OK' and 'Close' buttons.

# Excel 103 Topic

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Working with excel name ranges



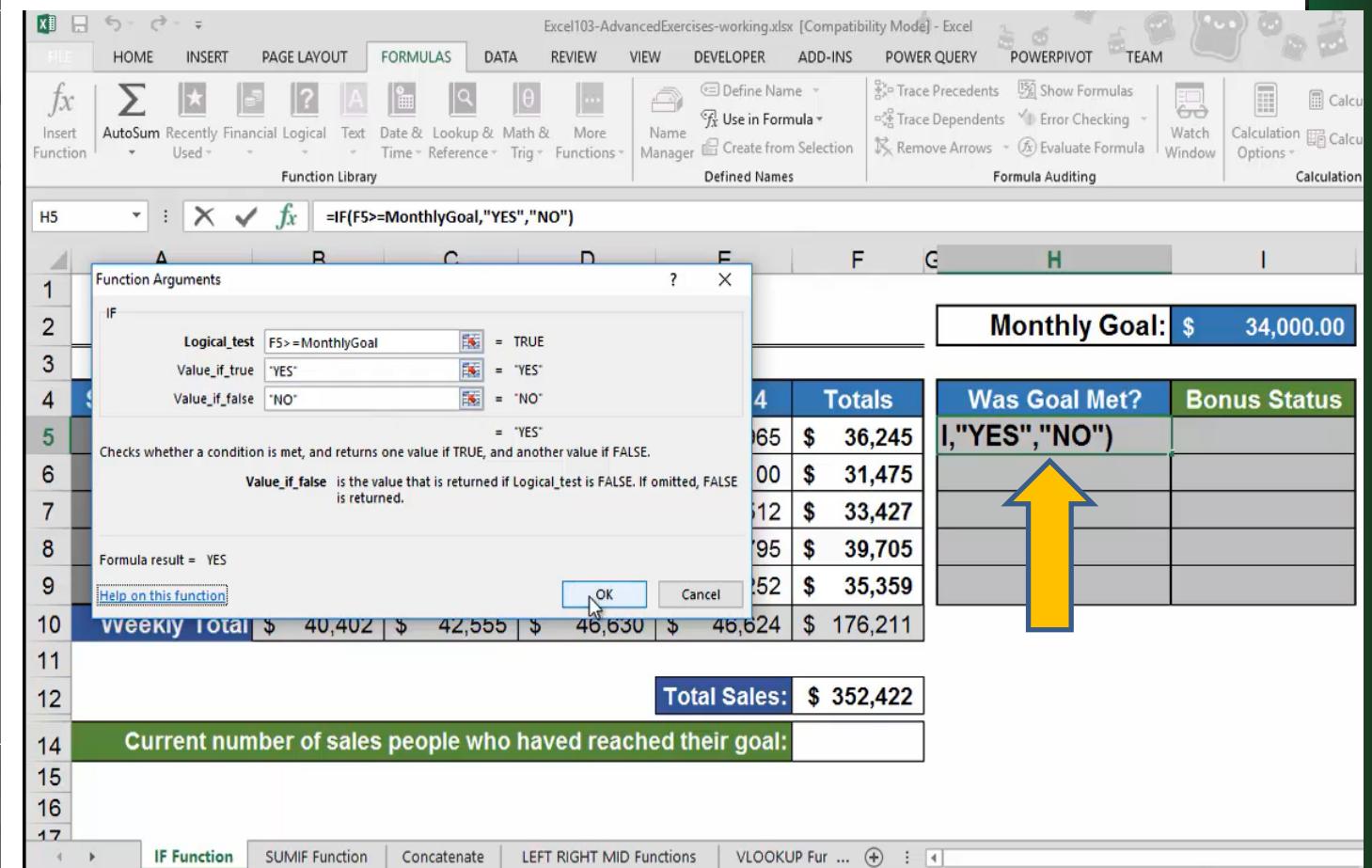
The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The spreadsheet contains a table of sales figures for December 2015. The table has columns for Sales Person, Week 1, Week 2, Week 3, Week 4, and Totals. Row 10 is highlighted in blue and labeled "Weekly Total". The formula bar at the top shows the text "Week\_2". A yellow arrow points from the text "Week\_2" in the formula bar down to the "Week 2" column header in the table. Another yellow arrow points from the "Week 2" column header up to the cell containing the value "7,695" in row 10, which is also highlighted in green.

Sales Person	Week 1	Week 2	Week 3	Week 4	Totals
H. James	\$ 9,550	\$ 9,230	\$ 8,500	\$ 8,965	\$ 36,245
K. Dunn	\$ 5,975	\$ 6,900	\$ 8,500	\$ 10,100	\$ 31,475
L. Carrie	\$ 7,425	\$ 8,580	\$ 9,910	\$ 7,512	\$ 33,427
R. Smith	\$ 9,560	\$ 10,150	\$ 10,200	\$ 9,795	\$ 39,705
D. O'Brian	\$ 7,892	\$ 7,695	\$ 9,520	\$ 10,252	\$ 35,359
Weekly Total	\$ 40,402				
					Total Sales: \$ 176,211
					Current number of sales people who have reached their goal:

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 2) Using excel-if-function



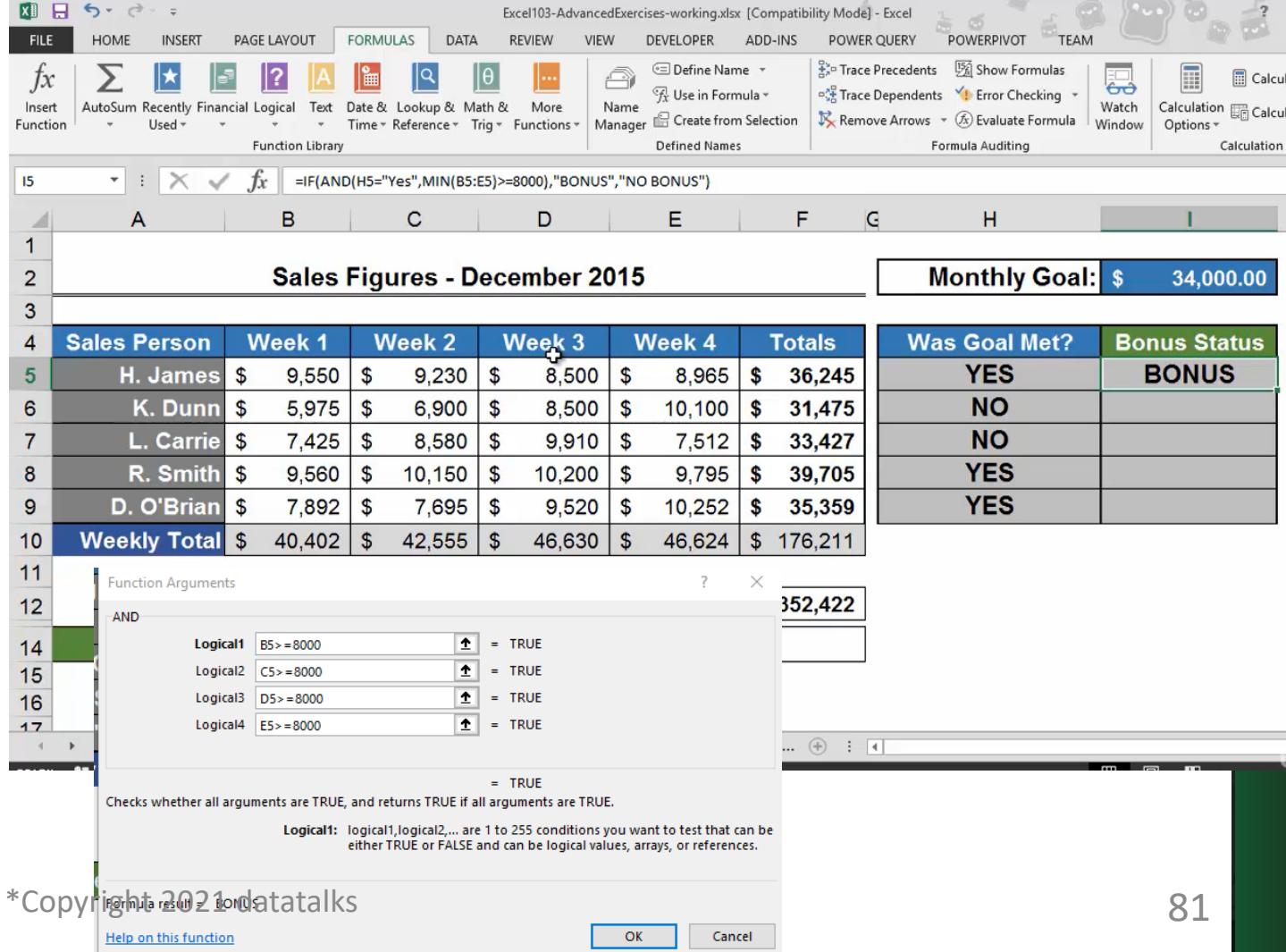
The screenshot shows a Microsoft Excel interface with the following details:

- Excel Window Title:** Excel103-AdvancedExercises-working.xlsx [Compatibility Mode] - Excel
- Tab Bar:** HOME, INSERT, PAGE LAYOUT, FORMULAS (selected), DATA, REVIEW, VIEW, DEVELOPER, ADD-INS, POWER QUERY, POWERPIVOT, TEAM
- Function Library:** AutoSum, Recently Used, Financial Functions, Logical Functions, Text Functions, Date & Time Functions, Lookup & Reference Functions, Math & Trig Functions, More Functions.
- Cell H5:** Contains the formula `=IF(F5>=MonthlyGoal,"YES","NO")`.
- Function Arguments Dialog (IF):**
  - Logical\_test: `F5>=MonthlyGoal`
  - Value\_if\_true: `"YES"`
  - Value\_if\_false: `"NO"`
- Text in Cell F5:** `Monthly Goal: $ 34,000.00`
- Table Headers:** `Totals`, `Was Goal Met?`, `Bonus Status`
- Data Rows:** Row 4 shows `Totals` and `Was Goal Met? I,"YES","NO"`. A yellow arrow points from this row to the `Value_if_true` field in the dialog.
- Formulas Row:** Row 10 shows `weekly Total` and `Total Sales: $ 352,422`.
- Text Row:** Row 14 shows `Current number of sales people who have reached their goal:`
- Formula Bar:** Shows `IF Function` selected.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 3) Nesting function



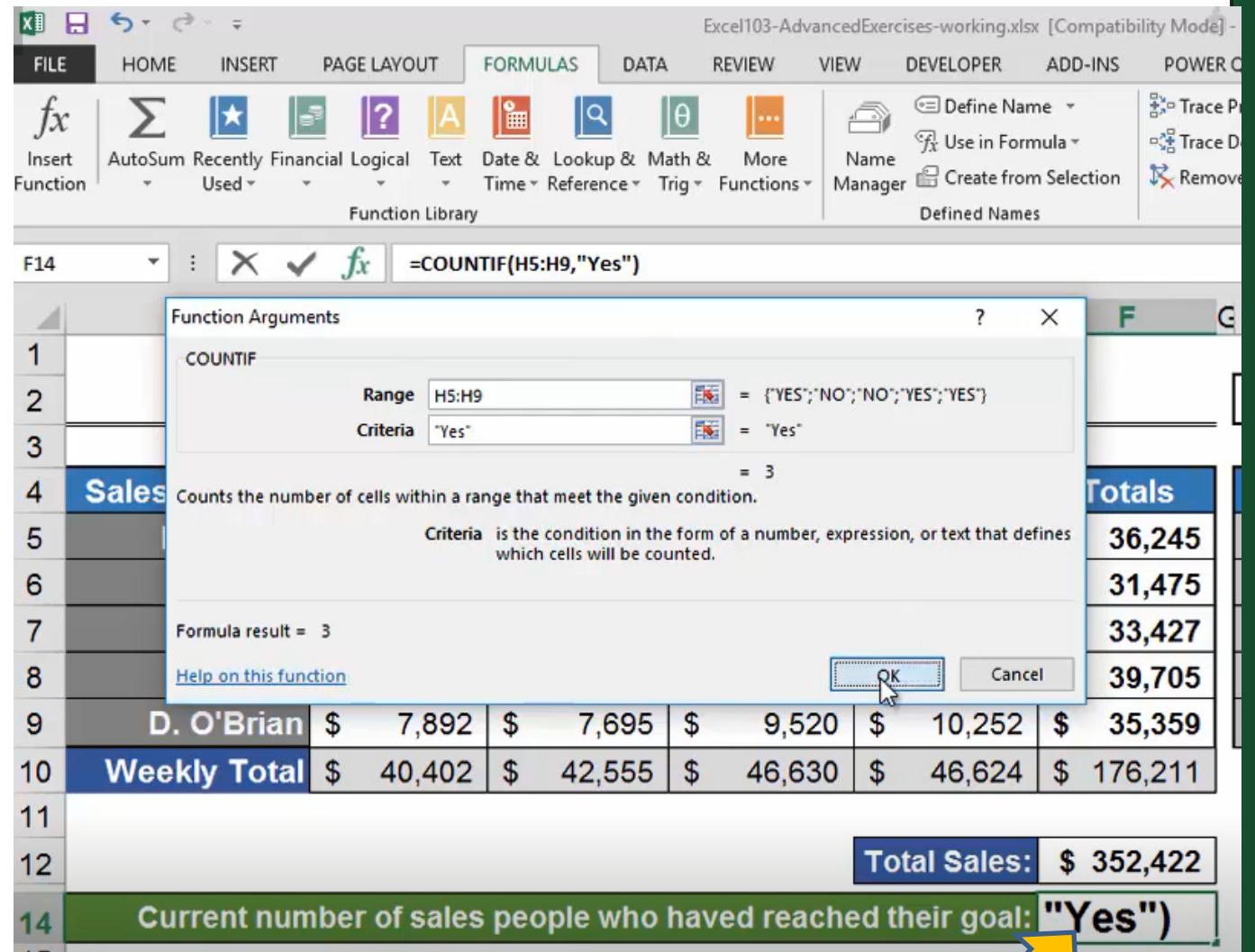
The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar displays the formula `=IF(AND(H5="Yes",MIN(B5:E5)>=8000),"BONUS","NO BONUS")`. The main table is titled "Sales Figures - December 2015" and includes columns for Sales Person, Week 1 through Week 4, and Totals. A separate table on the right shows "Was Goal Met?" and "Bonus Status" based on a monthly goal of \$34,000.00. A "Function Arguments" dialog box is open, showing the "AND" function with four logical arguments: `B5>=8000`, `C5>=8000`, `D5>=8000`, and `E5>=8000`. The result of the AND function is shown as `352,422`.

\*Copyright 2021 datatalks

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 4) Using excel countif function



The screenshot shows a Microsoft Excel interface with the 'FORMULAS' tab selected. A formula bar at the top contains the text '=COUNTIF(H5:H9,"Yes")'. A 'Function Arguments' dialog box is open, centered over a table. The dialog box title is 'Function Arguments' and it shows the function 'COUNTIF' with its parameters: 'Range' set to 'H5:H9' (containing the values 'YES', 'NO', 'NO', 'YES', 'YES') and 'Criteria' set to 'Yes'. Below the dialog box, the table data is visible:

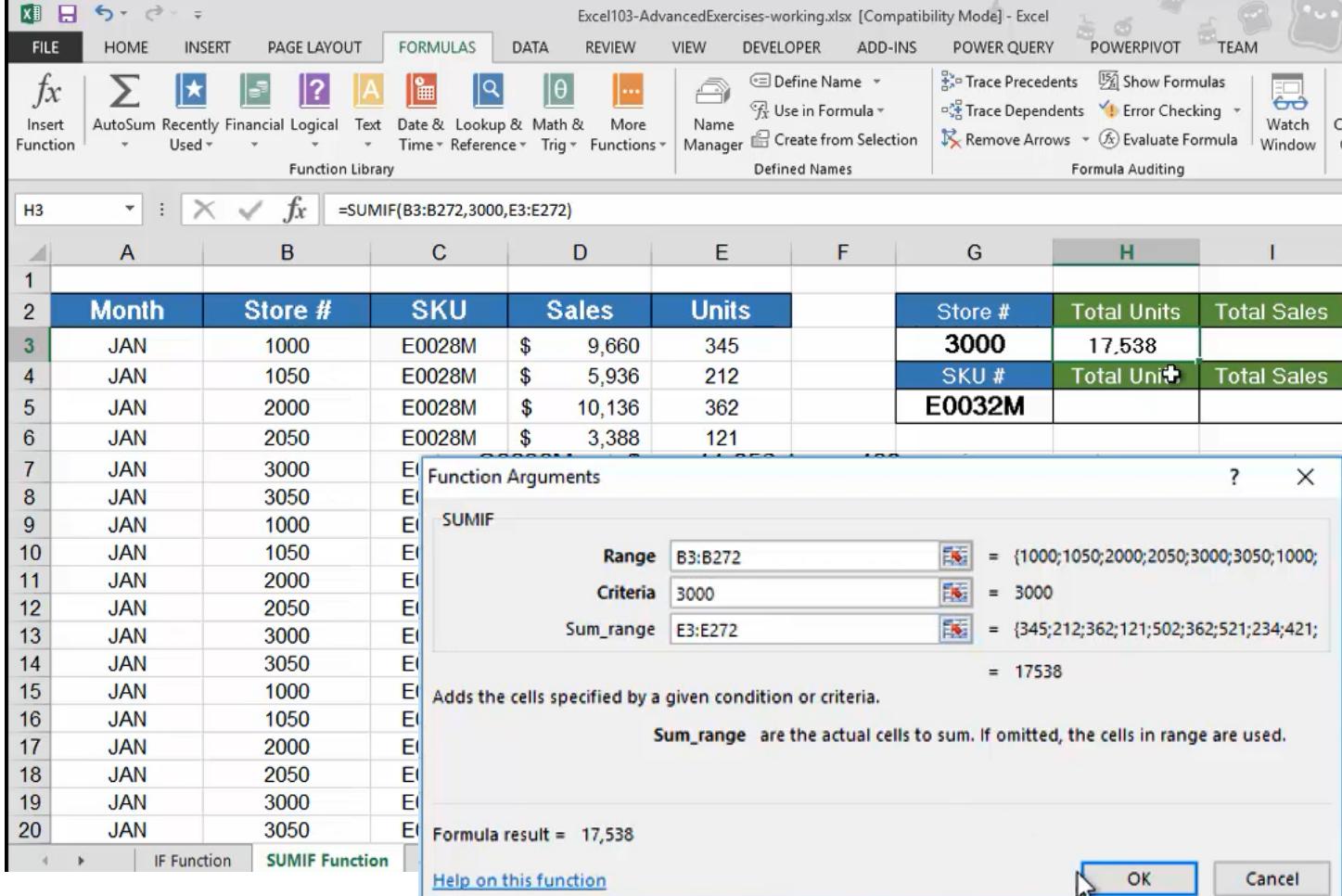
		Totals				
1		36,245	31,475	33,427	39,705	
2	Sales					
3						
4	D. O'Brian	\$ 7,892	\$ 7,695	\$ 9,520	\$ 10,252	\$ 35,359
5	Weekly Total	\$ 40,402	\$ 42,555	\$ 46,630	\$ 46,624	\$ 176,211
6						
7						
8						
9						
10						
11						
12						
13						
14						Total Sales: \$ 352,422
15						Current number of sales people who have reached their goal: "Yes")

A yellow arrow points from the text 'Current number of sales people who have reached their goal: "Yes")' in the status bar to the 'Criteria' field in the dialog box.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 5) Using excel sumif function



The screenshot shows an Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar displays the formula =SUMIF(B3:B272,3000,E3:E272). The "FORMULAS" tab is selected, and the "Function Library" group is open, showing the "SUM" icon. The spreadsheet contains a table with columns: Month, Store #, SKU, Sales, and Units. A secondary table on the right shows totals for Store #, Total Units, and Total Sales. The "Function Arguments" dialog box is open, specifically the "SUMIF" section. It shows the Range as B3:B272, Criteria as 3000, and Sum\_range as E3:E272. The formula result is displayed as 17,538. The "OK" button is visible at the bottom right of the dialog.

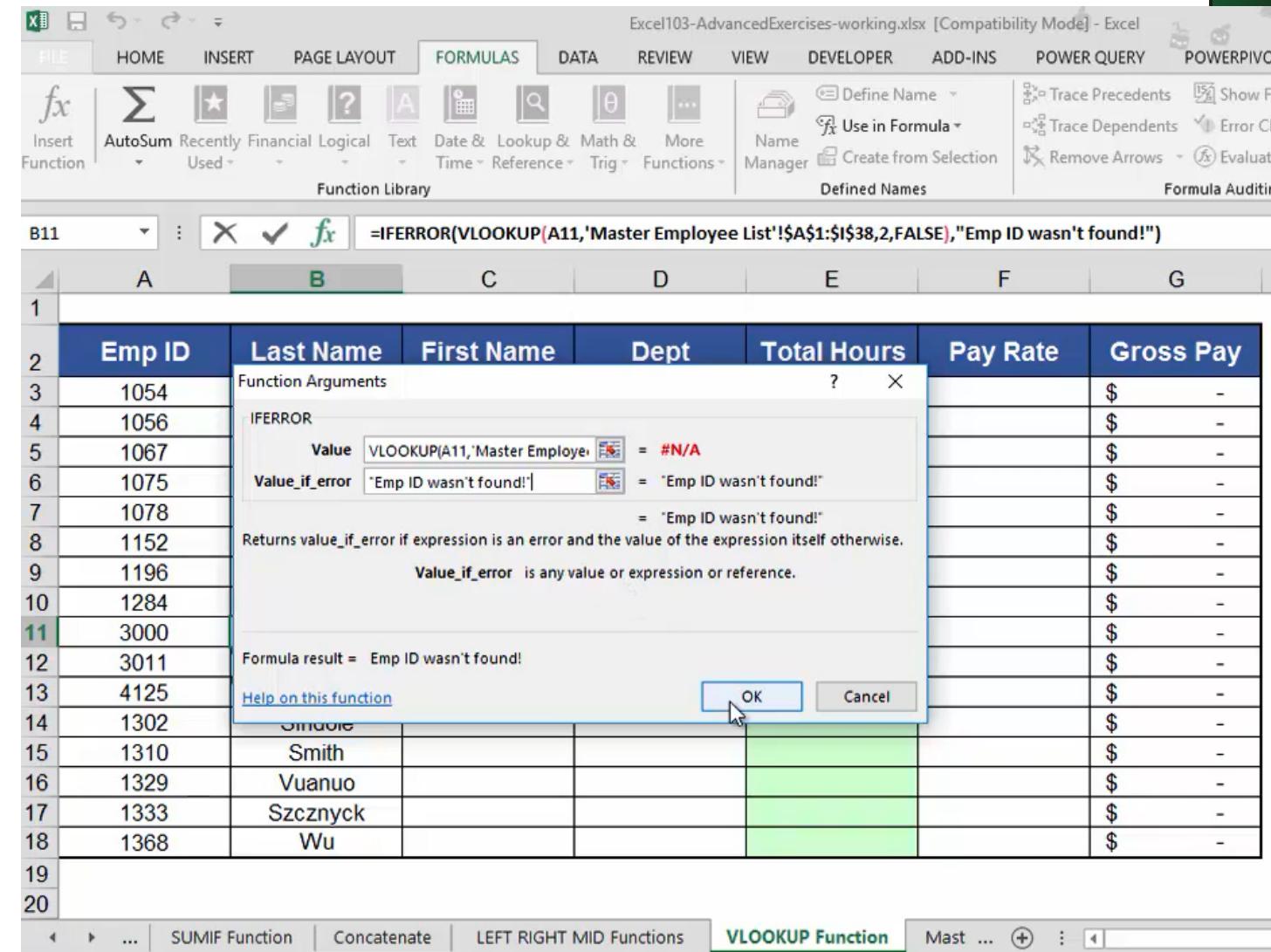
Month	Store #	SKU	Sales	Units
JAN	1000	E0028M	\$ 9,660	345
JAN	1050	E0028M	\$ 5,936	212
JAN	2000	E0028M	\$ 10,136	362
JAN	2050	E0028M	\$ 3,388	121
JAN	3000			
JAN	3050			
JAN	1000			
JAN	1050			
JAN	2000			
JAN	2050			
JAN	3000			
JAN	3050			
JAN	1000			
JAN	1050			
JAN	2000			
JAN	2050			
JAN	3000			
JAN	3050			
JAN	1000			
JAN	1050			
JAN	2000			
JAN	2050			
JAN	3000			
JAN	3050			

Store #	Total Units	Total Sales
3000	17,538	
SKU #	Total Units	Total Sales
E0032M		

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 6) Using excel iferror function

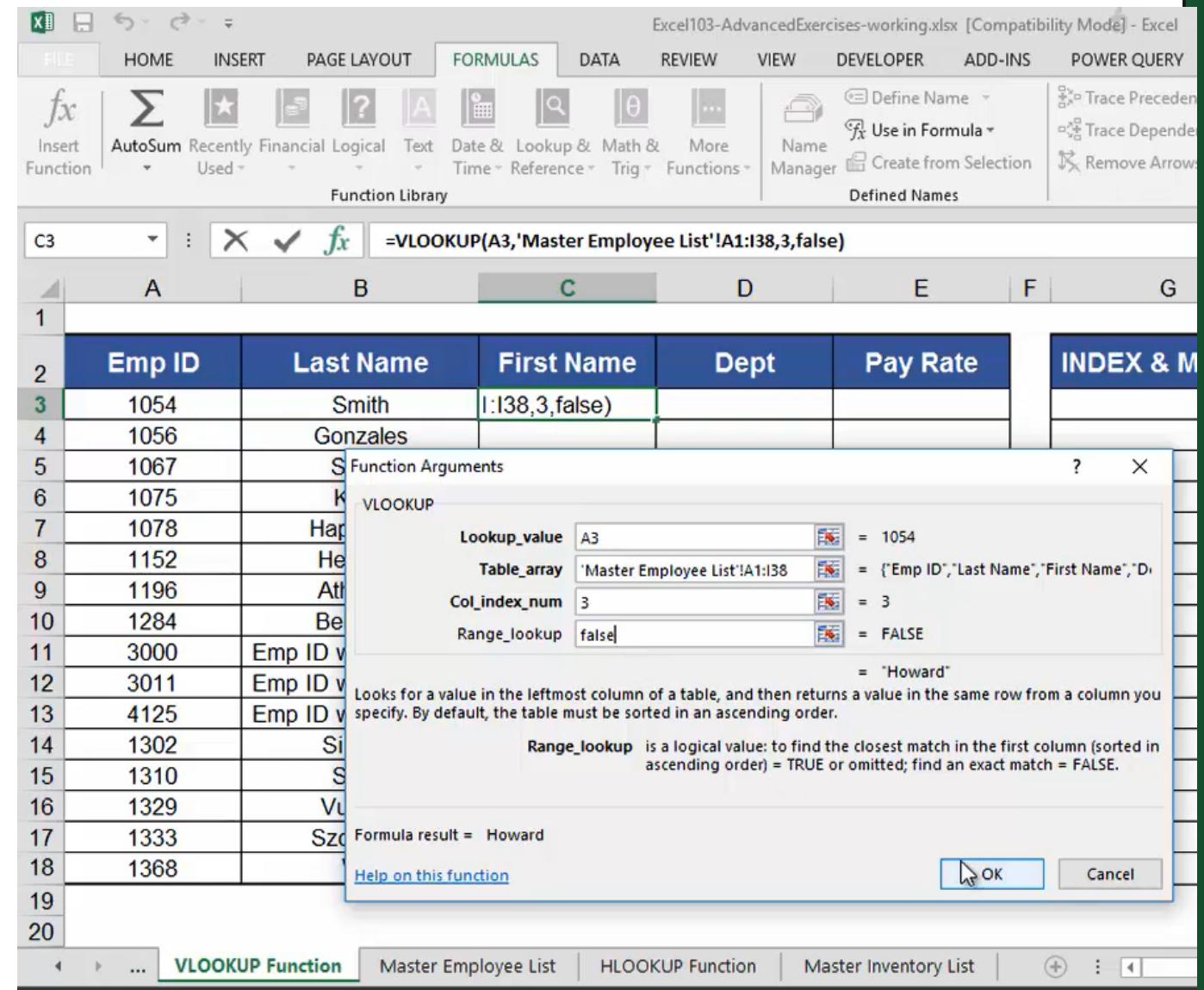


The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar displays the formula =IFERROR(VLOOKUP(A11,'Master Employee List'!\$A\$1:\$I\$38,2, FALSE),"Emp ID wasn't found!"). The "FORMULAS" tab is selected in the ribbon. A callout box highlights the "Function Arguments" dialog box for the IFERROR function. The dialog box shows the "Value" field containing "VLOOKUP(A11,'Master Employee List'!\$A\$1:\$I\$38,2, FALSE)" which results in "#N/A", and the "Value\_if\_error" field containing "'Emp ID wasn't found!'". The formula result is displayed as "Emp ID wasn't found!". The "OK" button is visible at the bottom right of the dialog box.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Using excel vlookup function



The screenshot shows a Microsoft Excel interface with the following details:

- File Tab:** Excel103-AdvancedExercises-working.xlsx [Compatibility Mode] - Excel
- Formulas Tab:** Selected.
- Function Library:** AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math & Trig, More.
- Defined Names:** Name Manager, Create from Selection, Trace Precedent, Trace Dependents, Remove Arrow.
- Cell C3:** Contains the formula `=VLOOKUP(A3,'Master Employee List'!A1:I38,3,false)`.
- Table Headers:** Emp ID, Last Name, First Name, Dept, Pay Rate.
- Table Data:** Rows 3 to 18 show employee information. Row 3: Emp ID 1054, Last Name Smith, First Name I:I38,3,false. Row 4: Emp ID 1056, Last Name Gonzales. Row 5: Emp ID 1067. Row 6: Emp ID 1075. Row 7: Emp ID 1078. Row 8: Emp ID 1152. Row 9: Emp ID 1196. Row 10: Emp ID 1284. Row 11: Emp ID 3000. Row 12: Emp ID 3011. Row 13: Emp ID 4125. Row 14: Emp ID 1302. Row 15: Emp ID 1310. Row 16: Emp ID 1329. Row 17: Emp ID 1333. Row 18: Emp ID 1368.
- VLOOKUP Function Dialog Box:**
  - Lookup\_value:** A3 (Emp ID 1054).
  - Table\_array:** 'Master Employee List'!A1:I38 (Range of the table).
  - Col\_index\_num:** 3 (First name column).
  - Range\_lookup:** false (Exact match).

Description: Looks for a value in the leftmost column of a table, and then returns a value in the same row from a column you specify. By default, the table must be sorted in an ascending order.

Formula result = Howard

Help on this function

# Excel 103 Topic

1. Working with excel conditional function
  2. Working with excel lookup function
  3. Working with excel text-based function
  4. Auditing an excel worksheet
  5. Protecting excel worksheet and workbook
  6. Mastering excel what-if-tools



## 2) Using excel hlookup function

The screenshot shows a Microsoft Excel spreadsheet titled "Inventory Status Check". The formula bar displays the formula `=HLOOKUP(B3,'Master Inventory List'!A2:G5,3,false)`. The cell B3 contains the value "XP200". A callout box highlights the formula arguments in the "Function Arguments" dialog box:

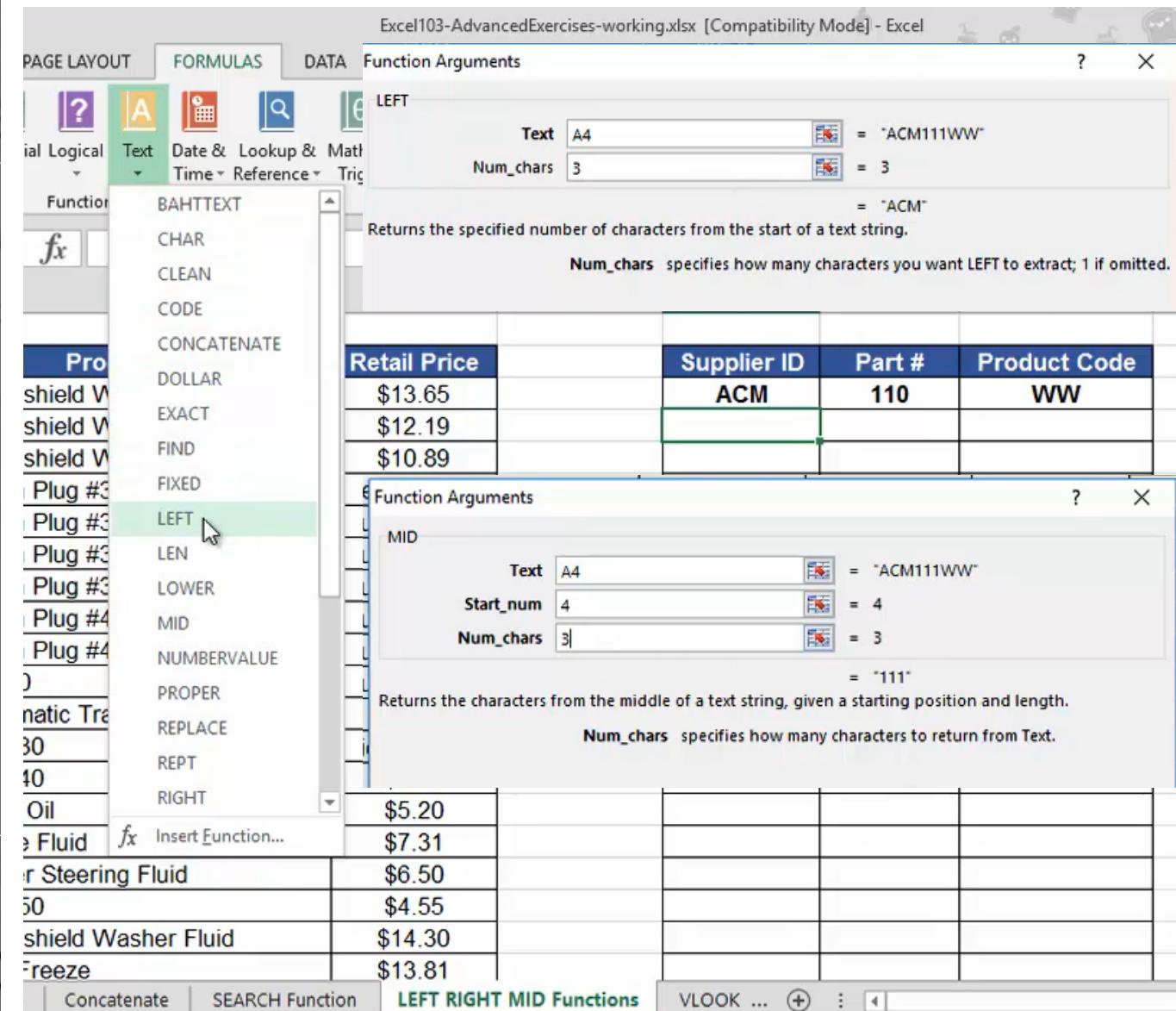
- Lookup\_value**: B3 = "XP200"
- Table\_array**: 'Master Inventory List'!A2:G5 = {"Product Code"; "XP100", "XP200", "XP300", "XP400", "XP500"} (Note: The table array is shown as an array of values, likely due to a bug or specific configuration.)
- Row\_index\_num**: 3 = 3
- Range\_lookup**: false = FALSE

The formula result is 110. A note below the dialog box states: "Range\_lookup is a logical value: to find the closest match in the top row (sorted in ascending order) = TRUE or omitted; find an exact match = FALSE."

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Using excels left right and mid function



The screenshot shows the Microsoft Excel ribbon with the FORMULAS tab selected. A context menu is open over a cell containing the text "ACM111WW". The menu path "Text" → "LEFT" is highlighted. Two Function Arguments dialog boxes are displayed side-by-side.

**Function Arguments - LEFT**

- Text:** A4 = "ACM111WW"
- Num\_chars:** 3 = 3  
= "ACM"

Returns the specified number of characters from the start of a text string.  
Num\_chars specifies how many characters you want LEFT to extract; 1 if omitted.

**Function Arguments - MID**

- Text:** A4 = "ACM111WW"
- Start\_num:** 4 = 4
- Num\_chars:** 3 = 3  
= "111"

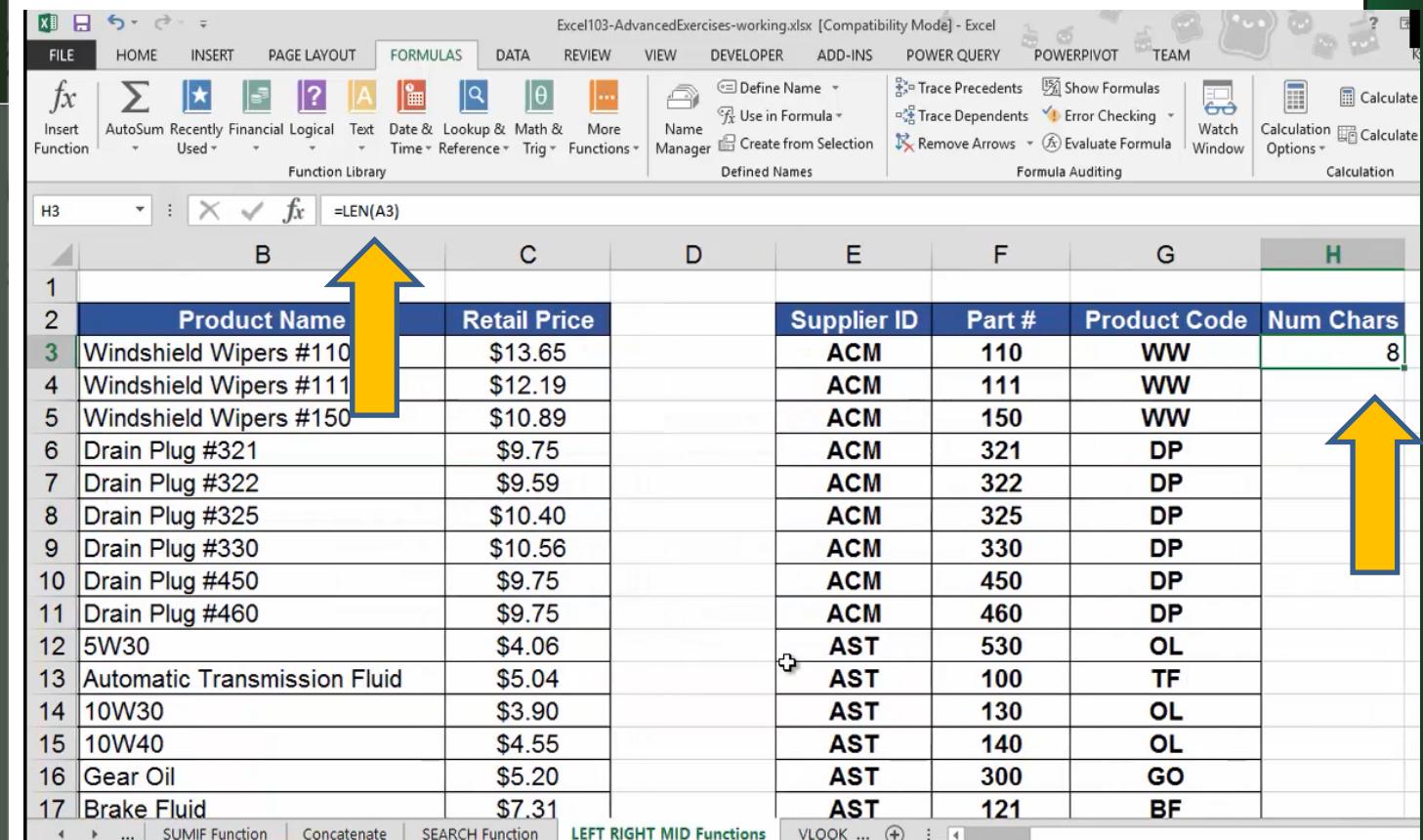
Returns the characters from the middle of a text string, given a starting position and length.  
Num\_chars specifies how many characters to return from Text.

The background shows a table with columns: Retail Price, Supplier ID, Part #, and Product Code. The first row contains values: \$13.65, ACM, 110, and WW respectively.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 2) Using excel len function



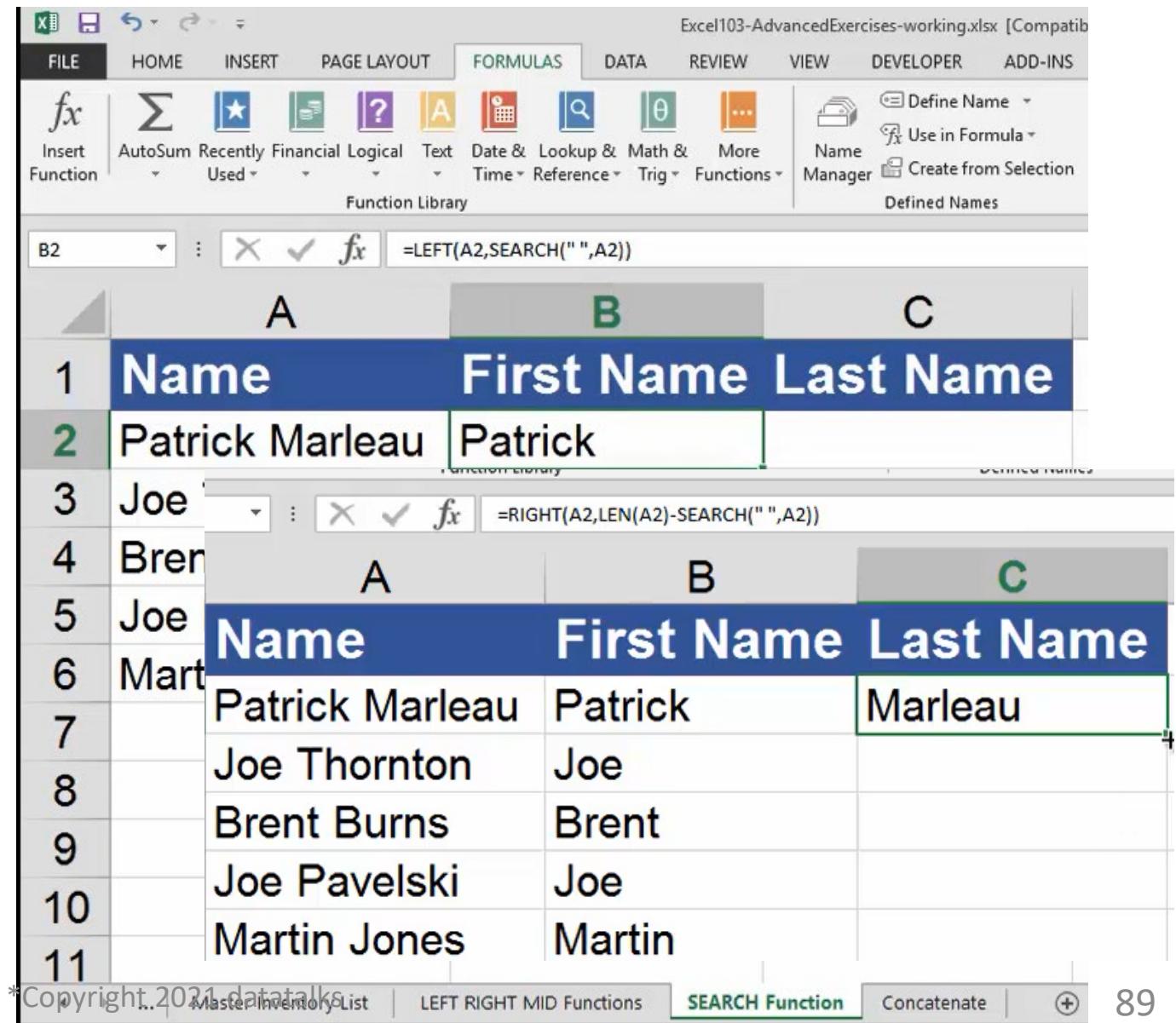
The screenshot shows an Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar at the top displays the formula `=LEN(A3)`. The spreadsheet contains two tables. The first table (B2:D17) lists products with their names in column B and retail prices in column C. The second table (E2:H17) lists supplier information with columns for Supplier ID, Part #, Product Code, and Num Chars. A yellow arrow points from the formula bar to the cell B3, which contains the product name "Windshield Wipers #110". Another yellow arrow points from the formula bar to the cell H3, which contains the result "8", indicating the length of the string in cell A3.

	B	C	D	E	F	G	H
1	Product Name	Retail Price		Supplier ID	Part #	Product Code	Num Chars
2	Windshield Wipers #110	\$13.65		ACM	110	WW	8
3	Windshield Wipers #111	\$12.19		ACM	111	WW	
4	Windshield Wipers #150	\$10.89		ACM	150	WW	
5	Drain Plug #321	\$9.75		ACM	321	DP	
6	Drain Plug #322	\$9.59		ACM	322	DP	
7	Drain Plug #325	\$10.40		ACM	325	DP	
8	Drain Plug #330	\$10.56		ACM	330	DP	
9	Drain Plug #450	\$9.75		ACM	450	DP	
10	Drain Plug #460	\$9.75		ACM	460	DP	
11	5W30	\$4.06		AST	530	OL	
12	Automatic Transmission Fluid	\$5.04		AST	100	TF	
13	10W30	\$3.90		AST	130	OL	
14	10W40	\$4.55		AST	140	OL	
15	Gear Oil	\$5.20		AST	300	GO	
16	Brake Fluid	\$7.31		AST	121	BF	

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 3) Using excel search function



The screenshot shows an Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar displays the formula `=LEFT(A2,SEARCH(" ",A2))`. The spreadsheet contains two tables of data. The first table has columns A, B, and C, with headers "Name", "First Name", and "Last Name". The second table also has columns A, B, and C, with headers "Name", "First Name", and "Last Name". In the first table, row 2 shows the formula being used to extract "Patrick" from "Patrick Marleau". In the second table, rows 5 and 6 show the formula being used to extract "Joe" and "Marl" respectively from "Joe" and "Marl".

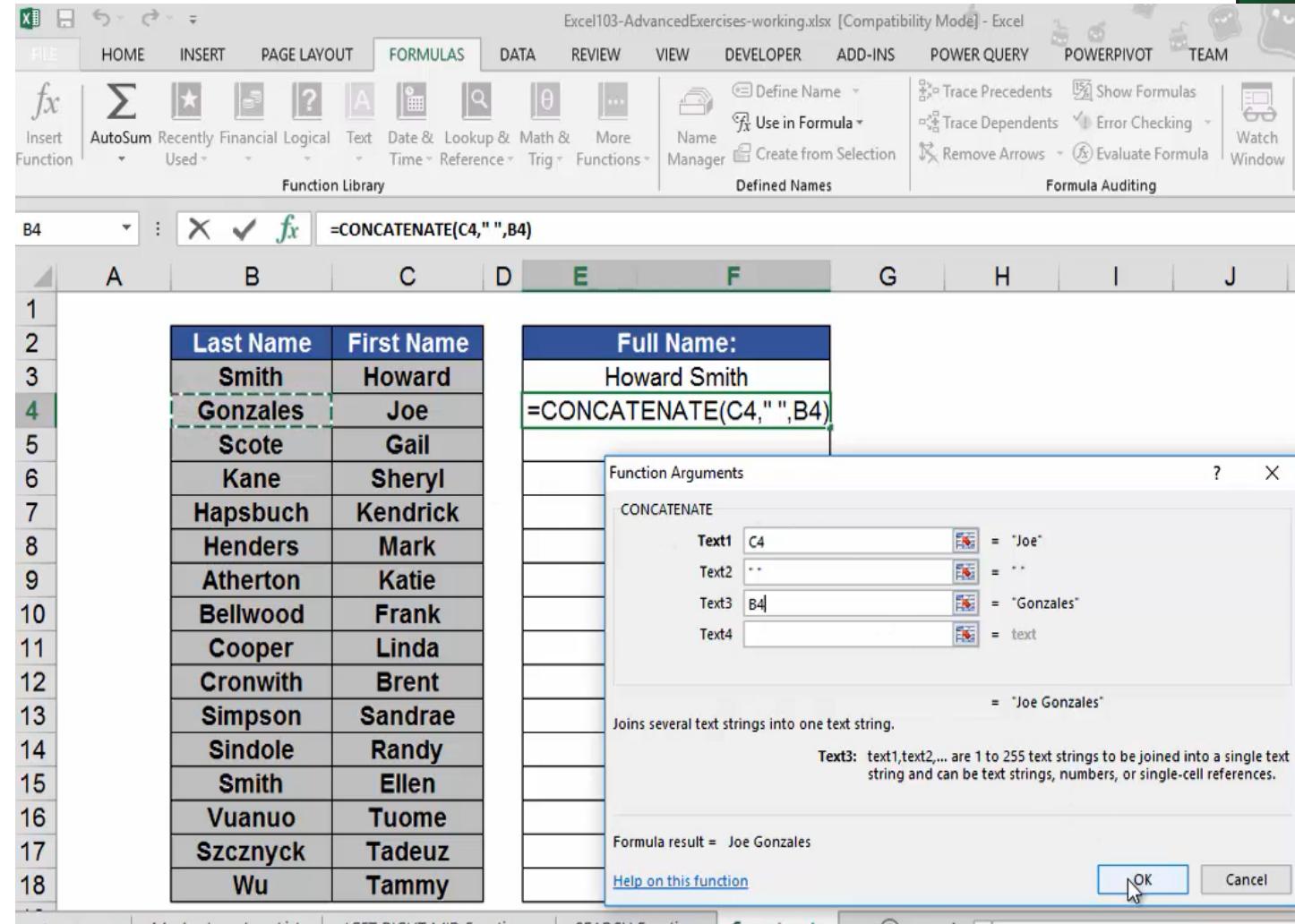
	A	B	C
1	Name	First Name	Last Name
2	Patrick Marleau	Patrick	
3	Joe		
4	Bren		
5	Joe	A	B
6	Mart		C
7	Patrick Marleau	Patrick	
8	Joe Thornton	Joe	
9	Brent Burns	Brent	
10	Joe Pavelski	Joe	
11	Martin Jones	Martin	

\*Copyright 2021 datatalks | LEFT RIGHT MID Functions | SEARCH Function | Concatenate | +

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 4) Using excels concatenate function

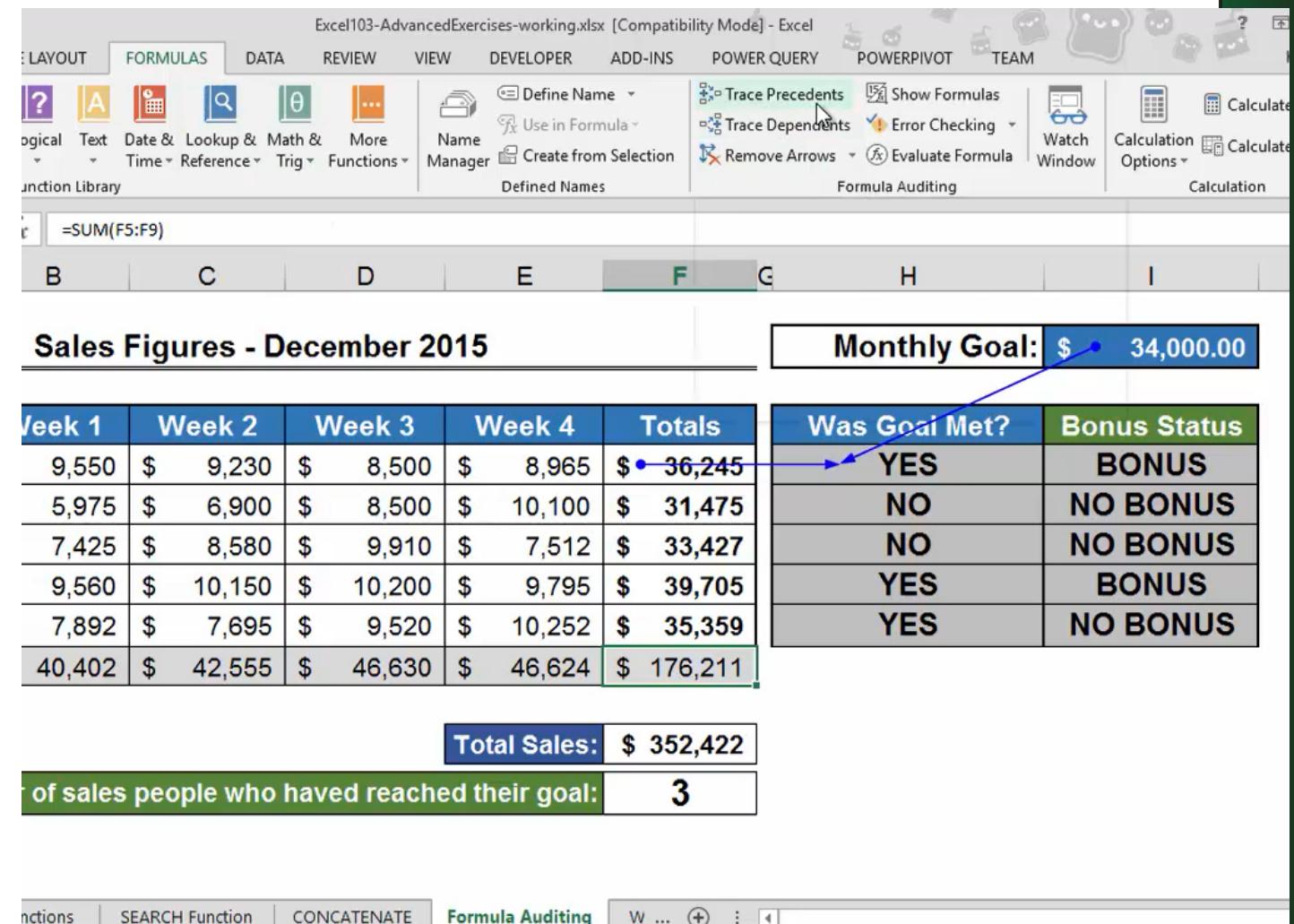


The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The spreadsheet contains two tables. The first table has columns "Last Name" and "First Name" with rows for Smith, Gonzales, Scote, Kane, Hapsbuch, Henders, Atherton, Bellwood, Cooper, Cronwith, Simpson, Sindole, Smith, Vuanuo, Szczyneck, and Wu. The second table has a single row labeled "Full Name:" with the value "Howard Smith". A formula bar at the top shows the formula =CONCATENATE(C4, " ", B4). A "Function Arguments" dialog box is open, showing the parameters for the CONCATENATE function: Text1 is C4 (value Joe), Text2 is a blank cell (value ""), Text3 is B4 (value "Gonzales"), and Text4 is another blank cell (value ""). The formula result is displayed as "Joe Gonzales".

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Tracing precedents in excel formulas



Sales Figures - December 2015

Week 1	Week 2	Week 3	Week 4	Totals
9,550	\$ 9,230	\$ 8,500	\$ 8,965	\$ 36,245
5,975	\$ 6,900	\$ 8,500	\$ 10,100	\$ 31,475
7,425	\$ 8,580	\$ 9,910	\$ 7,512	\$ 33,427
9,560	\$ 10,150	\$ 10,200	\$ 9,795	\$ 39,705
7,892	\$ 7,695	\$ 9,520	\$ 10,252	\$ 35,359
40,402	\$ 42,555	\$ 46,630	\$ 46,624	\$ 176,211

Monthly Goal: \$ 34,000.00

Total Sales: \$ 352,422

of sales people who have reached their goal: 3

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 2) Tracing dependents in excel formulas

The screenshot shows an Excel spreadsheet titled "Sales Figures - December 2015". The spreadsheet includes a header row, data for five sales persons (H. James, K. Dunn, L. Carrie, R. Smith, D. O'Brian), weekly sales totals, and a summary row for weekly and total sales. A "Monthly Goal" of \$34,000.00 is set in cell C12. A "Bonus Status" table on the right shows results for each sales person based on whether they met their goal. The "Formula Auditing" ribbon tab is selected, and a yellow arrow points to the "Trace Dependents" button in the ribbon bar.

Sales Person	Week 1	Week 2	Week 3	Week 4	Totals
H. James	\$ 9,550	\$ 9,230	\$ 8,500	\$ 8,965	\$ 36,245
K. Dunn	\$ 5,975	\$ 6,900	\$ 8,500	\$ 10,100	\$ 31,475
L. Carrie	\$ 7,425	\$ 8,580	\$ 9,910	\$ 7,512	\$ 33,427
R. Smith	\$ 9,560	\$ 10,150	\$ 10,200	\$ 9,795	\$ 39,705
D. O'Brian	\$ 7,892	\$ 7,695	\$ 9,520	\$ 10,252	\$ 35,359
<b>Weekly Total</b>	<b>\$ 40,402</b>	<b>\$ 42,555</b>	<b>\$ 46,630</b>	<b>\$ 46,624</b>	<b>\$ 176,211</b>

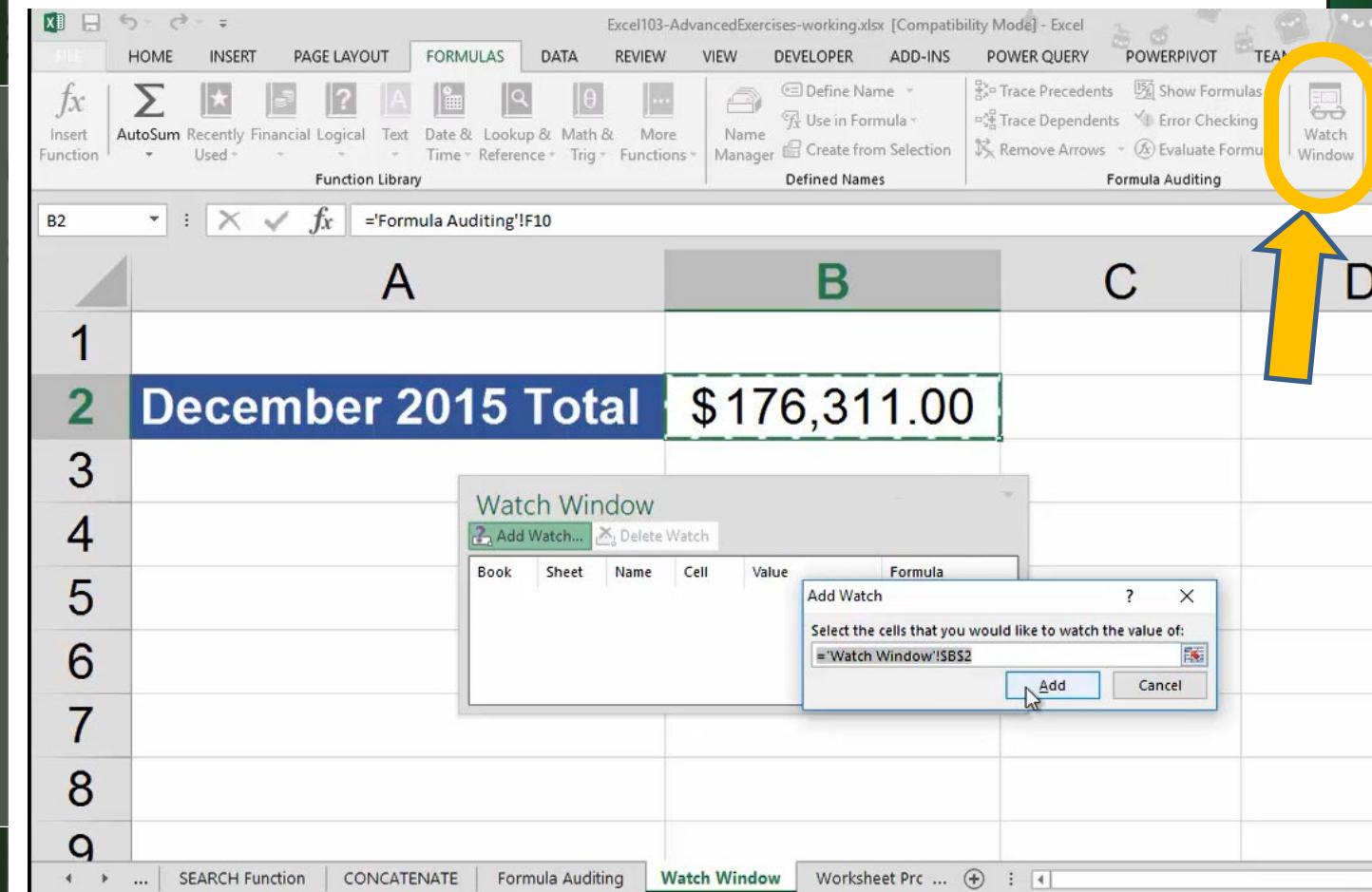
Total Sales: \$ 352,422

Current number of sales people who have reached their goal: 3

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

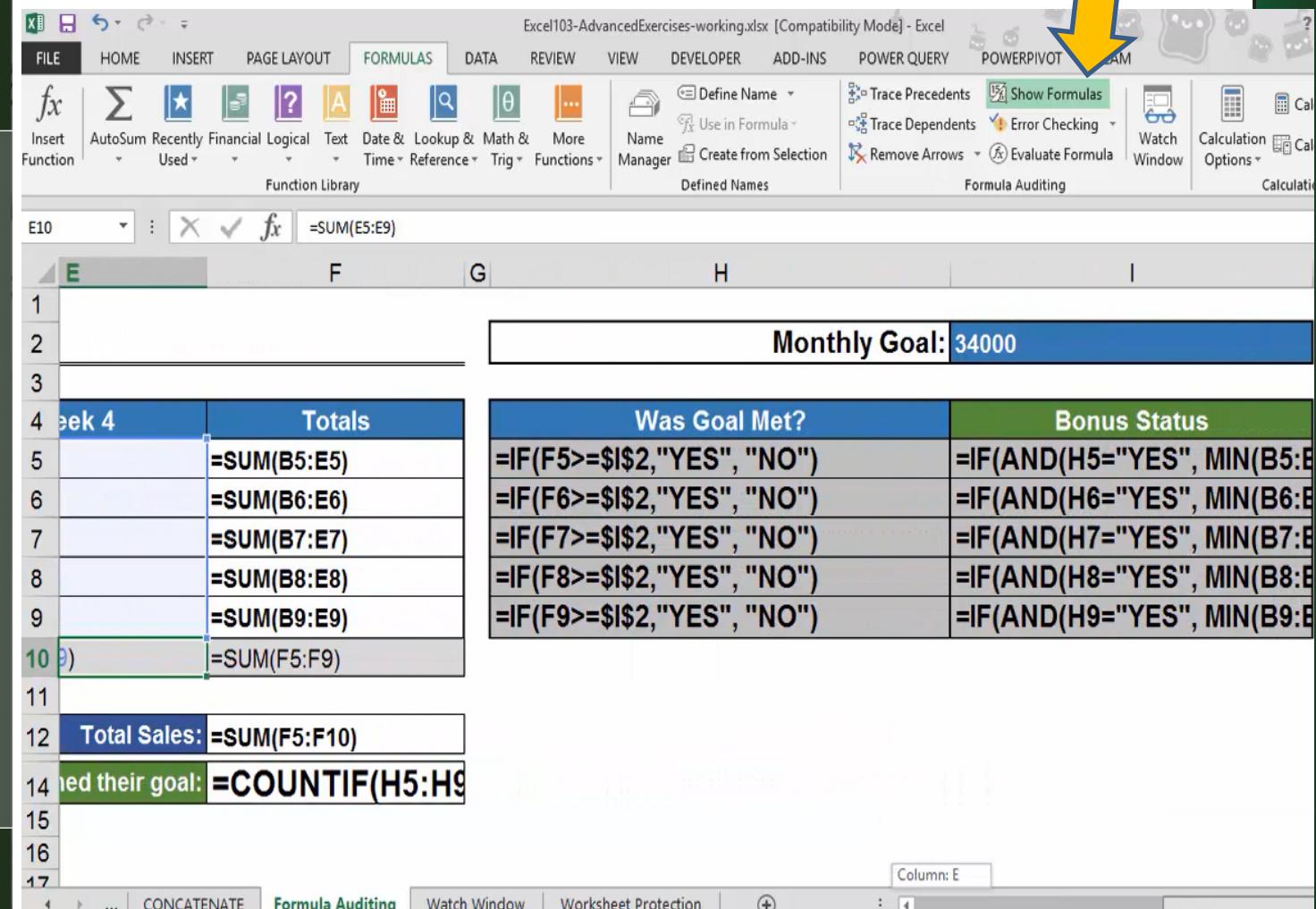
## 3) Working with the watch window



# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 4) Showing formulas



The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The "FORMULAS" tab is selected in the ribbon. A yellow arrow points to the "Show Formulas" button in the "Formula Auditing" group. The spreadsheet contains several formulas:

Week 4	Totals	Was Goal Met?	Bonus Status
	=SUM(B5:E5)	=IF(F5>=\$I\$2,"YES", "NO")	=IF(AND(H5="YES", MIN(B5:E5)>=34000), "Bonus", "No Bonus")
	=SUM(B6:E6)	=IF(F6>=\$I\$2,"YES", "NO")	=IF(AND(H6="YES", MIN(B6:E6)>=34000), "Bonus", "No Bonus")
	=SUM(B7:E7)	=IF(F7>=\$I\$2,"YES", "NO")	=IF(AND(H7="YES", MIN(B7:E7)>=34000), "Bonus", "No Bonus")
	=SUM(B8:E8)	=IF(F8>=\$I\$2,"YES", "NO")	=IF(AND(H8="YES", MIN(B8:E8)>=34000), "Bonus", "No Bonus")
	=SUM(B9:E9)	=IF(F9>=\$I\$2,"YES", "NO")	=IF(AND(H9="YES", MIN(B9:E9)>=34000), "Bonus", "No Bonus")
10	=SUM(F5:F9)		
11			
12	Total Sales: =SUM(F5:F10)		
13	Met their goal: =COUNTIF(H5:H9, "YES")		
14			
15			
16			
17			

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Protecting specific cells in a worksheet

The screenshot shows a Microsoft Excel interface with a green-themed ribbon. The 'REVIEW' tab is selected. A yellow arrow points to the 'Protect Sheet' button in the 'Changes' group. A 'Protect Sheet' dialog box is open, showing the checkbox 'Protect worksheet and contents of locked cells' is checked, and a password '\*\*\*\*\*' is entered in the 'Password to unprotect sheet:' field. A 'Confirm Password' dialog box is also open, asking for reentry of the password '\*\*\*\*\*'. A callout bubble at the bottom left says 'First Step Remove Locked from Format Cell Protection'. The main worksheet area displays a table of sales data with various cells formatted with locks.

	Week 4	Totals
8,965	\$ 36,245	
10,100	\$ 31,475	
7,512	\$ 33,427	
9,795	\$ 39,705	
10,252	\$ 35,359	
0	\$ 46,624 \$ 176,211	

Total Sales: \$ 352,422

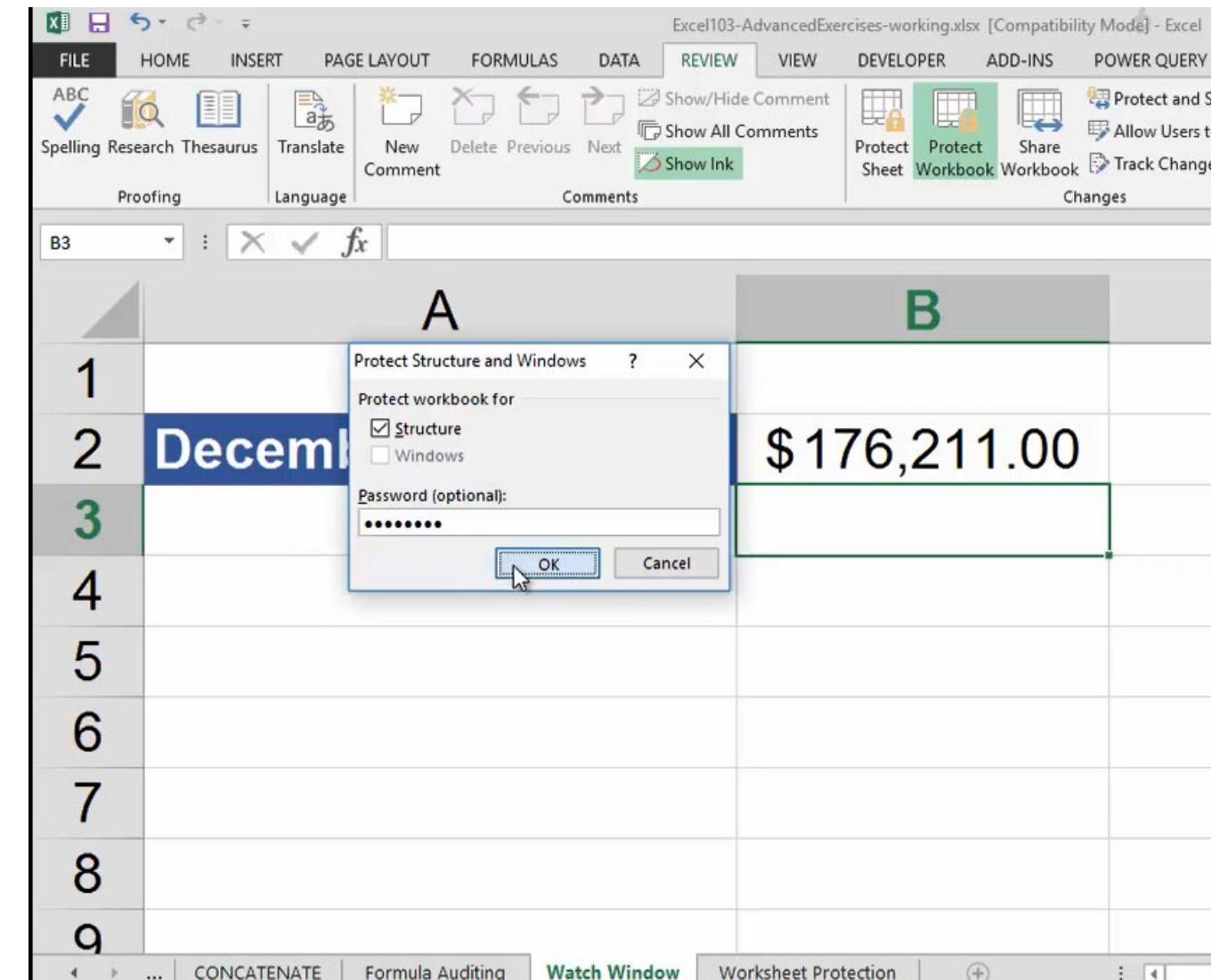
ached their goal: 3

17 CONCATENATE Formula Auditing Watch Window Worksheet Protection

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 2) Protecting the structure of a worksheet



# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools



## 3) Adding a workbook password.

The screenshot shows the Microsoft Excel ribbon with the 'Info' tab selected. On the right, a detailed view of the 'Protect Workbook' section is displayed, listing various protection options:

- Always Open Read-Only**: Prevent accidental changes by asking readers to opt-in to editing.
- Encrypt with Password**: Require a password to open this workbook.
- Protect Current Sheet**: Control what types of changes people can make to the current sheet.
- Protect Workbook Structure**: Prevent unwanted changes to the structure of the workbook, such as adding sheets.
- Restrict Access**: Grant people access while removing their ability to edit, copy, or print.
- Add a Digital Signature**: Ensure the integrity of the workbook by adding an invisible digital signature.
- Mark as Final**

\*Copyright 2021 datatalks

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 1) Working with excel Payment-PMT tool

The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The formula bar displays the formula =PMT(B3/12,B4,B2). The spreadsheet has two columns, A and B, with rows numbered 1 through 10. Rows 2, 3, and 4 are highlighted in blue. Row 2 contains "Mortgage Amount: \$220,000", row 3 contains "Interest Rate: 8%", and row 4 contains "Term in Months: 300". A formula audit ribbon is visible at the top, and a "Function Arguments" dialog box is open over the spreadsheet. The dialog box is titled "PMT" and shows the following arguments:

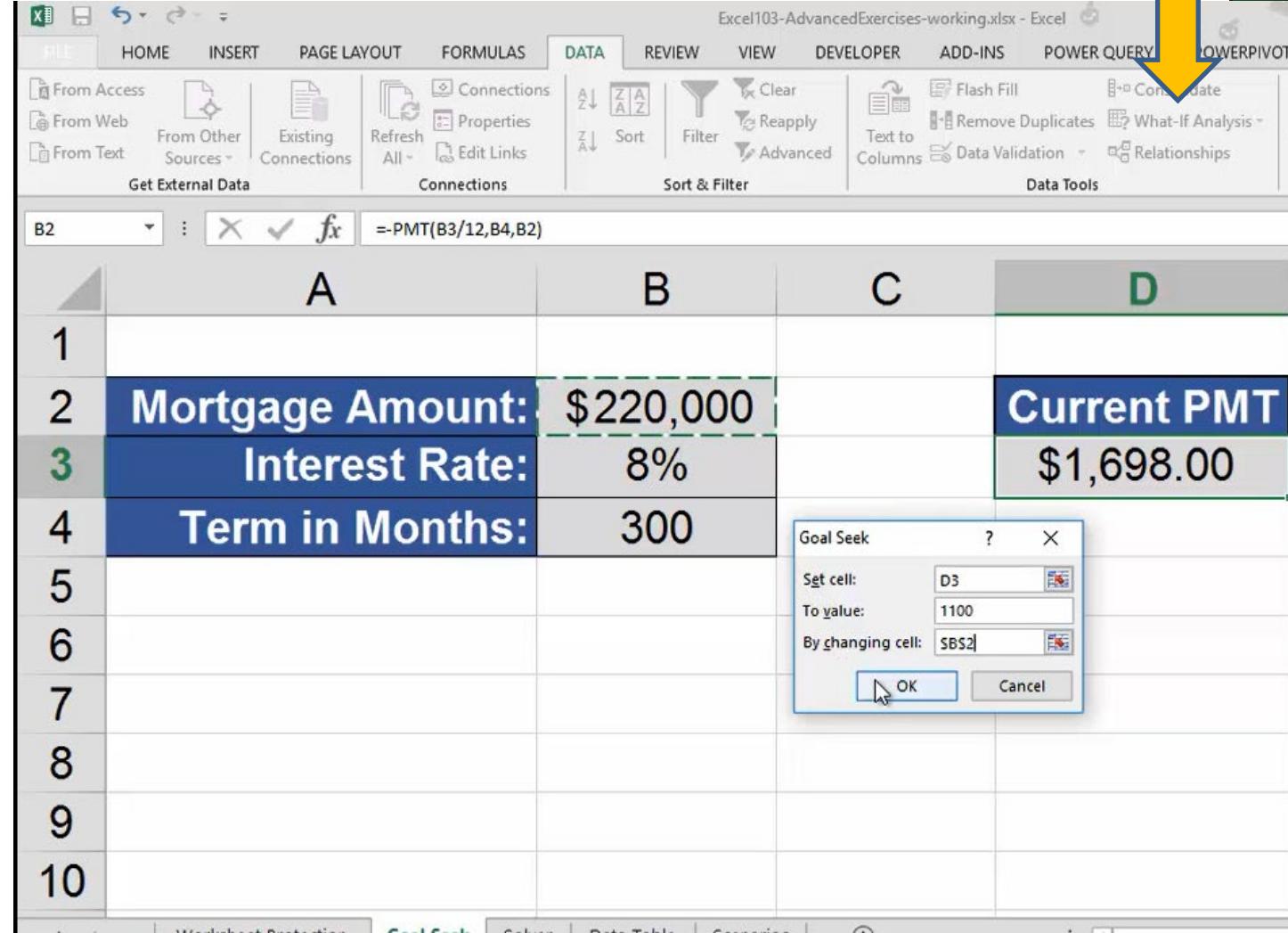
- Rate: B3/12 (Value: 0.006666667)
- Nper: B4 (Value: 300)
- Pv: B2 (Value: 220000)
- Fv: (Value: number)
- Type: (Value: number)

The dialog box also includes a note: "Calculates the payment for a loan based on constant payments and a constant interest rate." and "Pv is the present value: the total amount that a series of future payments is worth now." The formula result is shown as (\$1,698.00). Buttons for "OK" and "Cancel" are at the bottom right of the dialog box.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 2) Working with excel goal seek tool



The screenshot shows a Microsoft Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". The ribbon is visible at the top, with the "DATA" tab selected. The formula bar shows the formula =-PMT(B3/12,B4,B2). The spreadsheet contains the following data:

	A	B	C	D
1				
2	Mortgage Amount:	\$220,000		Current PMT
3	Interest Rate:	8%		\$1,698.00
4	Term in Months:	300		
5				
6				
7				
8				
9				
10				

A "Goal Seek" dialog box is open in the foreground, with the following settings:

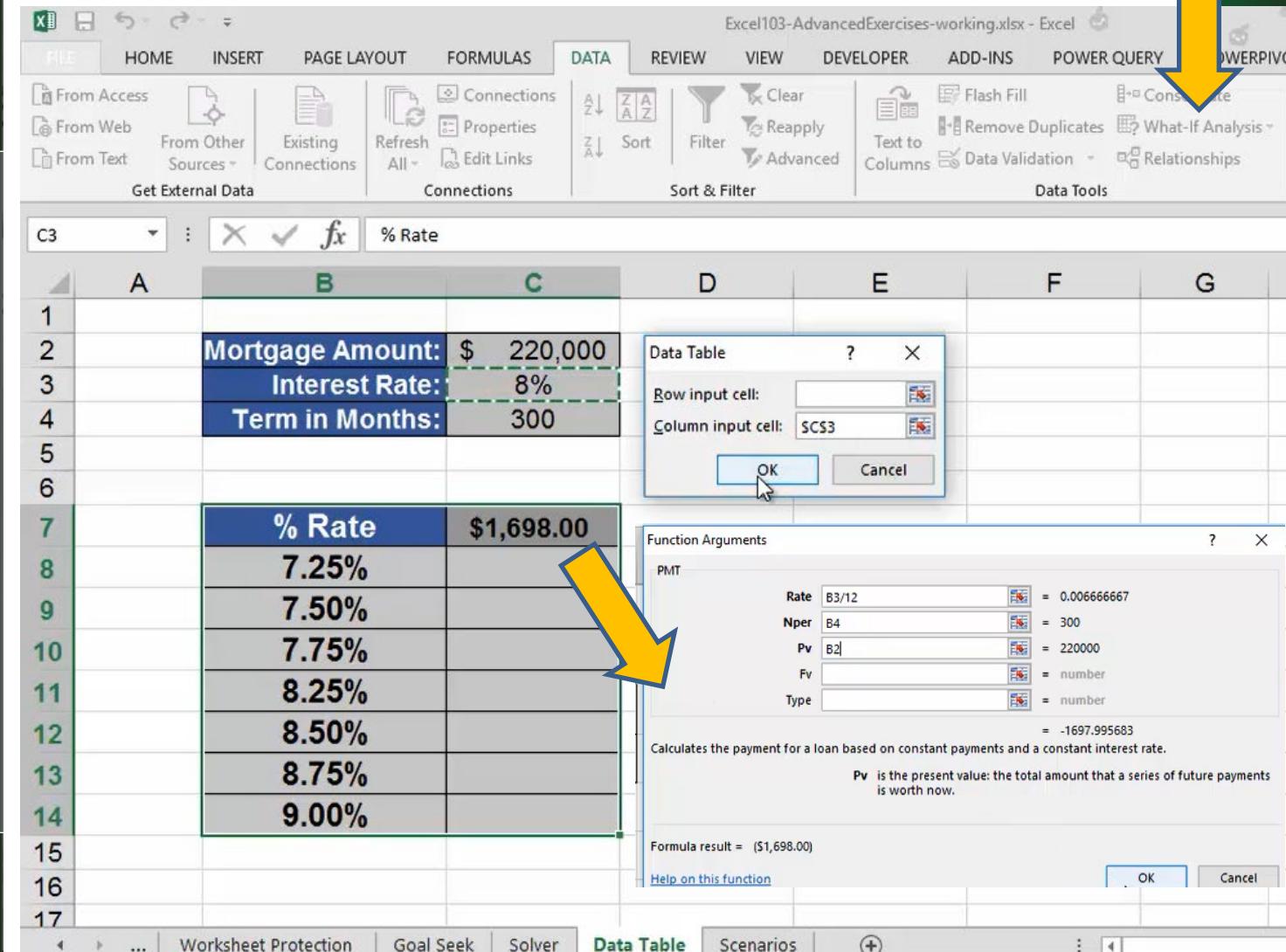
- Set cell: D3
- To value: 1100
- By changing cell: B\$2

Buttons for "OK" and "Cancel" are visible at the bottom of the dialog box.

# Excel 103 Topic

1. Working with excel conditional function
2. Working with excel lookup function
3. Working with excel text-based function
4. Auditing an excel worksheet
5. Protecting excel worksheet and workbook
6. Mastering excel what-if-tools

## 3) Building effective data tables in excel



The screenshot shows an Excel spreadsheet titled "Excel103-AdvancedExercises-working.xlsx". In the top ribbon, the "DATA" tab is selected. A yellow arrow points to the "Data Tools" section of the ribbon. Below the ribbon, a "Data Table" dialog box is open, showing "Row input cell: B3" and "Column input cell: \$C\$3". An "OK" button is highlighted with a yellow arrow. To the right of the dialog, a "Function Arguments" dialog for the PMT function is displayed, with the formula  $=PMT(B3/12, B4, B2)$ . The "Rate" argument is set to  $B3/12$ , "Nper" to  $B4$ , and "Pv" to  $B2$ . The "Type" argument is set to  $=number$ . The formula result is shown as  $=\$1,698.00$ . The main spreadsheet area contains a table with columns for "Mortgage Amount", "Interest Rate", and "Term in Months". A second table below shows the results of the PMT function for various interest rates from 7.25% to 9.00%.

	Mortgage Amount:	Interest Rate:	Term in Months:
2	\$ 220,000		
3		8%	
4			300

	% Rate	\$1,698.00
7	7.25%	
8	7.50%	
9	7.75%	
10	8.25%	
11	8.50%	
12	8.75%	
13	9.00%	

# THANK YOU



Instructor: Mr. Karan Thakur  
Mob: 9820042368

\*Copyright 2021 datatalks