5 THINGS
You Need to Know
Before Creating Pivot Tables

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5 Things You Need to Know Before Creating Pivot Tables

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Let's start with a story....

Debra Miller recently changed careers. After years of working as a medical receptionist, she took a new job working in office management at a medium-sized office supply company. She worked in the head sales office. A big opportunity came her way when a position in payroll opened up. She knew enough from dealing with the books to get the job.

But she didn't count on having to use Excel to calculate different sales reports that looked at the data in different ways – such as sales totals by product, by company, by region and by salesperson. This task soon became her most dreaded part of the job. At first, she would take the huge sales data table that just listed all the sales by date, but with region, salesperson, client, products and prices varying. She would copy the spreadsheet several times.

On one worksheet she would sum the sales total. On another she would individually copy and paste each salesperson line onto a different workbook and sum per person, apply the formulas and calculate totals. On yet another spreadsheet, she would individually copy and paste the line per region and finally she would add the individually copy and paste and sum sales by client. Essentially, she took a single report and spent hours turning it into six different reports. It was exhausting and tedious.

And then she was challenged one day by the CEO to look at individual product prices per salesperson to create a theoretical model for a sliding commission structure. Feeling overwhelmed already, she told her boss it would take her weeks to compile the report. He snapped at the idea of it taking this long and said, "just pivot the darn thing!"

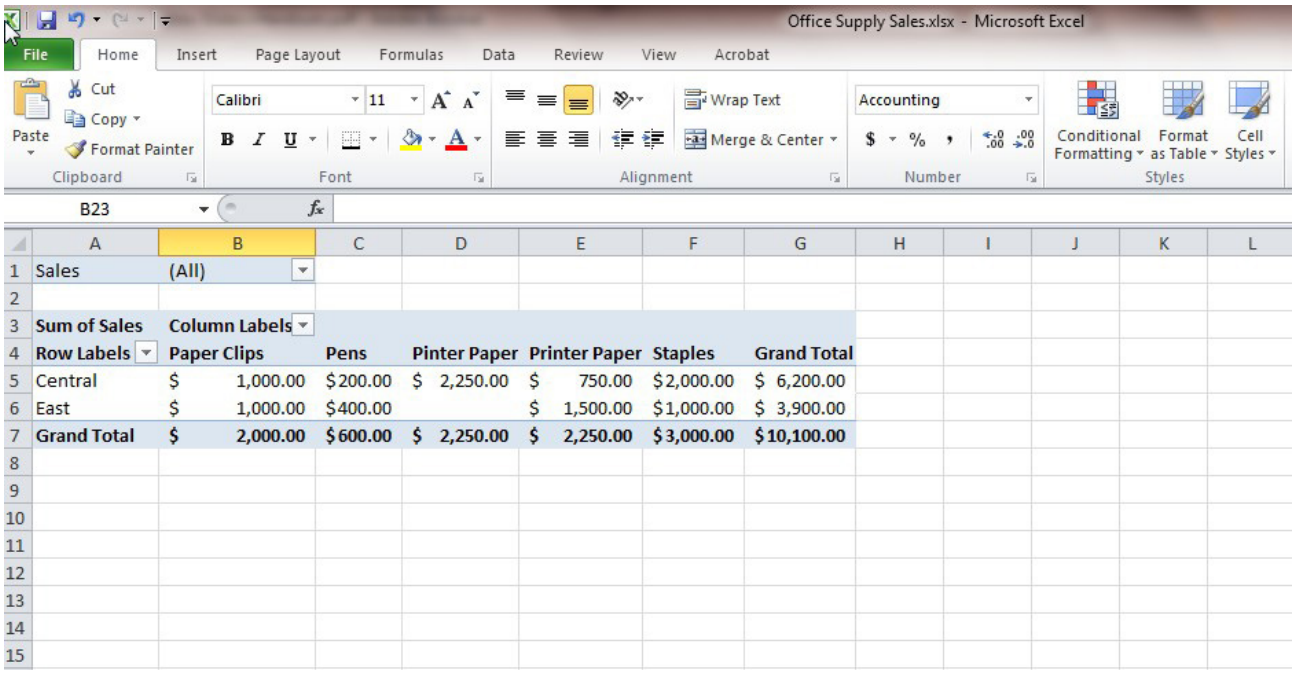
After hours of online research she became aware of Pivot Tables as the tool to allow her to look at the data, or pivot it, based on criteria she selected. It was instantaneous and interactive. It took her a few more hours to figure out how to get her pivot tables to work how she wanted them to, but finally she was able to create the report – and all of her future reports – in a fraction of the time she was used to.

While she was relieved that she could shave hours off her day and be far more efficient she felt and sinking emptiness thinking about the hours she wasted working in the dark. She knew that if she had just learned pivot tables – or better yet if someone trained her on them – from the beginning she could be much, much further in her job development.

It is with her story in mind that Learn Excel Now presents the following tips for getting start with Pivot Tables.

What is a Pivot Table?

A Pivot Table summarizes data using automatic calculations in a variety of combinations.

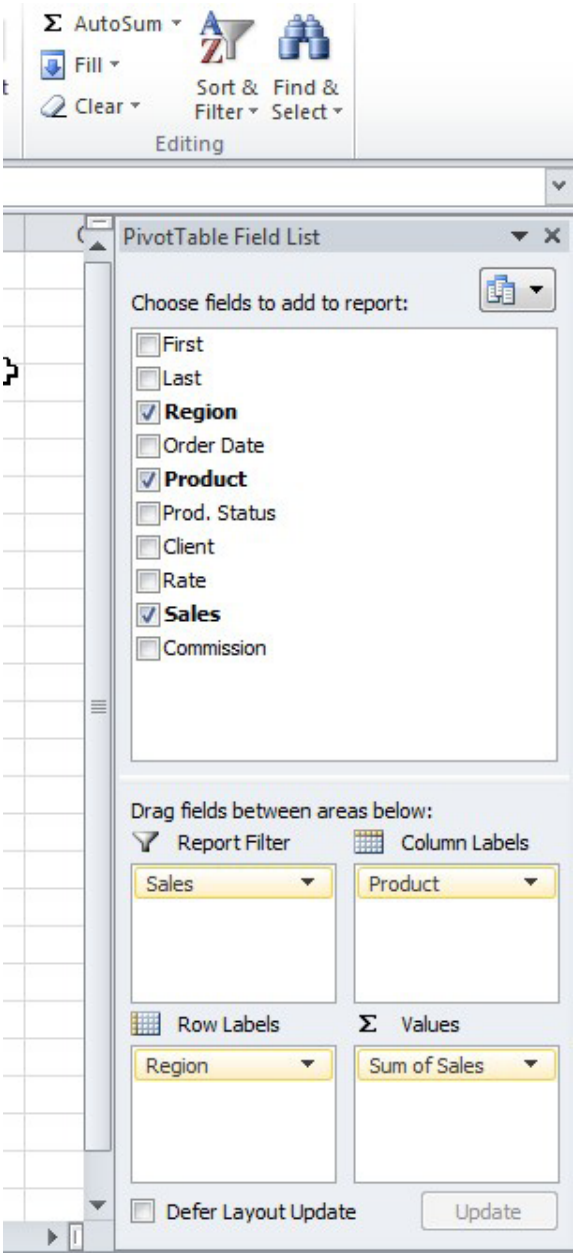


	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales	(All)										
2												
3	**Sum of Sales**	**Column Labels**										
4	**Row Labels**	**Paper Clips**	**Pens**	**Pinter Paper**	**Printer Paper**	**Staples**	**Grand Total**					
5	Central	$ 1,000.00	$200.00	$ 2,250.00	$ 750.00	$2,000.00	$ 6,200.00					
6	East	$ 1,000.00	$400.00		$ 1,500.00	$1,000.00	$ 3,900.00					
7	**Grand Total**	**$ 2,000.00**	**$600.00**	**$ 2,250.00**	**$ 2,250.00**	**$3,000.00**	**$10,100.00**					
8												
9												
10												
11												
12												
13												
14												
15												

- Pivot Tables are customizable and allow you to analyze data in a variety of ways
- Pivot Tables are interactive tools for data analysis
- Pivot Tables give a visual representation to your data

Tip: Always make sure you have column headings for the data you are Pivoting.

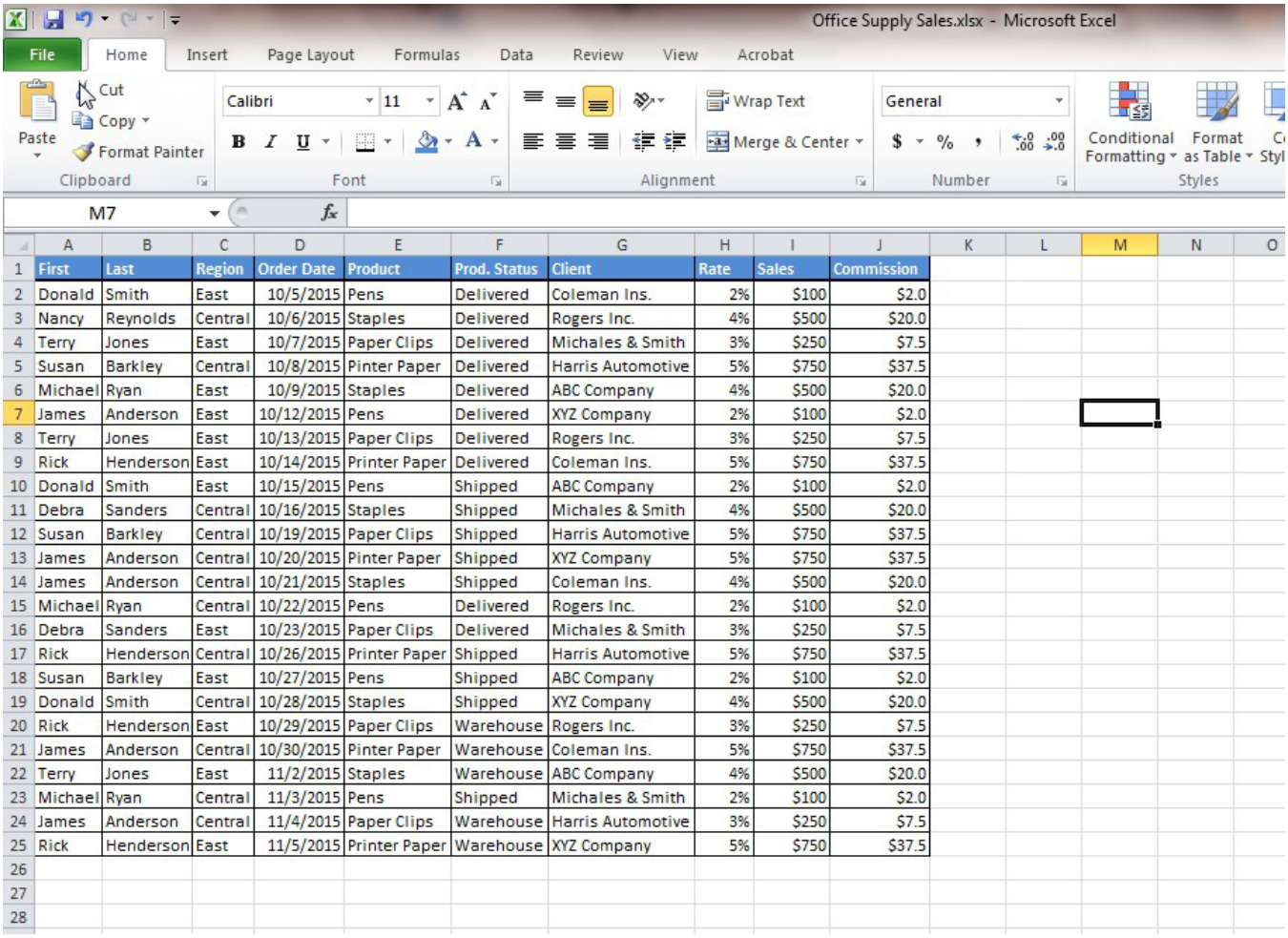
You can customize what data displays by placing column headings in one of four Pivot Tables: Report Filter, Column Labels, Row Labels and Values:



Why Use A Pivot Table?

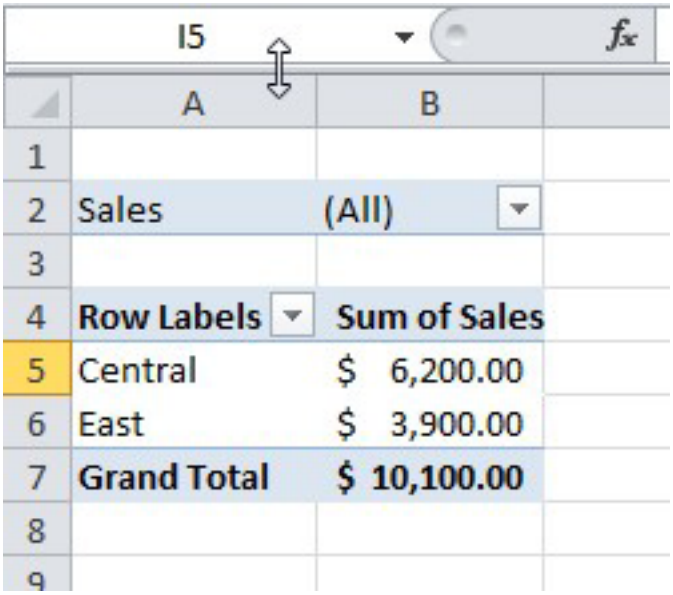
Pivot Tables give you to power to summarize, analyze and interpret a large amount of data by pivoting the pivotal information in a way that makes it more visible and easier to understand.

You can look at the data in several different ways using different Pivot Table layouts. Let's say you start with this sales spreadsheet:



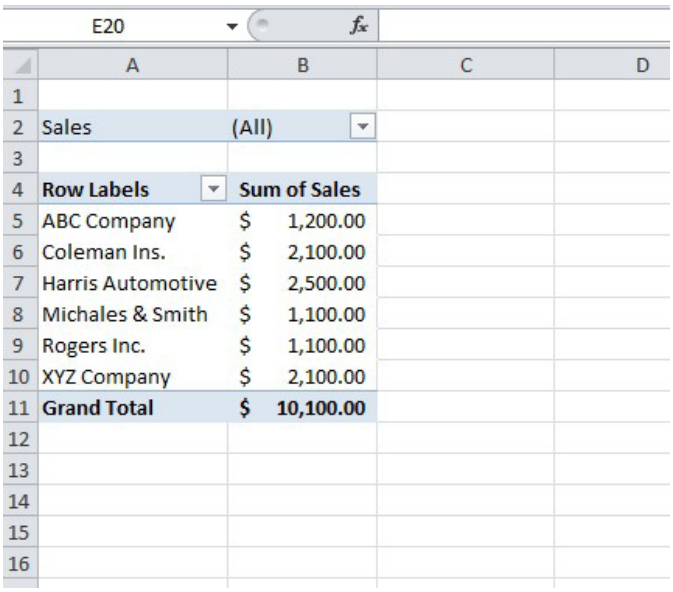
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	First	Last	Region	Order Date	Product	Prod. Status	Client	Rate	Sales	Commission					
2	Donald	Smith	East	10/5/2015	Pens	Delivered	Coleman Ins.	2%	$100	$2.0					
3	Nancy	Reynolds	Central	10/6/2015	Staples	Delivered	Rogers Inc.	4%	$500	$20.0					
4	Terry	Jones	East	10/7/2015	Paper Clips	Delivered	Michales & Smith	3%	$250	$7.5					
5	Susan	Barkley	Central	10/8/2015	Pinter Paper	Delivered	Harris Automotive	5%	$750	$37.5					
6	Michael	Ryan	East	10/9/2015	Staples	Delivered	ABC Company	4%	$500	$20.0					
7	James	Anderson	East	10/12/2015	Pens	Delivered	XYZ Company	2%	$100	$2.0					
8	Terry	Jones	East	10/13/2015	Paper Clips	Delivered	Rogers Inc.	3%	$250	$7.5					
9	Rick	Henderson	East	10/14/2015	Printer Paper	Delivered	Coleman Ins.	5%	$750	$37.5					
10	Donald	Smith	East	10/15/2015	Pens	Shipped	ABC Company	2%	$100	$2.0					
11	Debra	Sanders	Central	10/16/2015	Staples	Shipped	Michales & Smith	4%	$500	$20.0					
12	Susan	Barkley	Central	10/19/2015	Paper Clips	Shipped	Harris Automotive	5%	$750	$37.5					
13	James	Anderson	Central	10/20/2015	Pinter Paper	Shipped	XYZ Company	5%	$750	$37.5					
14	James	Anderson	Central	10/21/2015	Staples	Shipped	Coleman Ins.	4%	$500	$20.0					
15	Michael	Ryan	Central	10/22/2015	Pens	Delivered	Rogers Inc.	2%	$100	$2.0					
16	Debra	Sanders	East	10/23/2015	Paper Clips	Delivered	Michales & Smith	3%	$250	$7.5					
17	Rick	Henderson	Central	10/26/2015	Printer Paper	Shipped	Harris Automotive	5%	$750	$37.5					
18	Susan	Barkley	East	10/27/2015	Pens	Shipped	ABC Company	2%	$100	$2.0					
19	Donald	Smith	Central	10/28/2015	Staples	Shipped	XYZ Company	4%	$500	$20.0					
20	Rick	Henderson	East	10/29/2015	Paper Clips	Warehouse	Rogers Inc.	3%	$250	$7.5					
21	James	Anderson	Central	10/30/2015	Pinter Paper	Warehouse	Coleman Ins.	5%	$750	$37.5					
22	Terry	Jones	East	11/2/2015	Staples	Warehouse	ABC Company	4%	$500	$20.0					
23	Michael	Ryan	Central	11/3/2015	Pens	Shipped	Michales & Smith	2%	$100	$2.0					
24	James	Anderson	Central	11/4/2015	Paper Clips	Warehouse	Harris Automotive	3%	$250	$7.5					
25	Rick	Henderson	East	11/5/2015	Printer Paper	Warehouse	XYZ Company	5%	$750	$37.5					
26															
27															
28															

You could pivot this to look at Sales by Region:



	A	B
1		
2	Sales	(All)
3		
4	Row Labels	Sum of Sales
5	Central	$ 6,200.00
6	East	$ 3,900.00
7	Grand Total	$ 10,100.00
8		

Sales by Company:

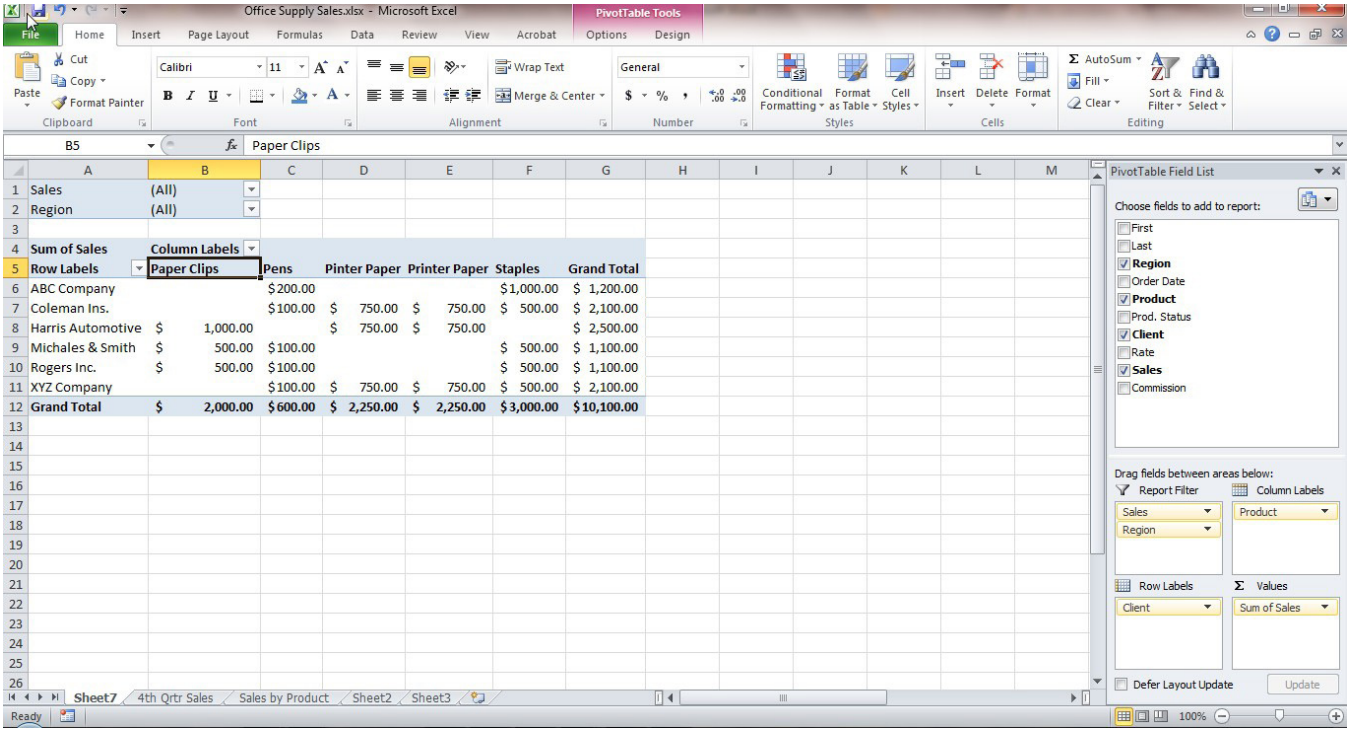


	A	B	C	D
1				
2	Sales	(All)		
3				
4	Row Labels	Sum of Sales		
5	ABC Company	$ 1,200.00		
6	Coleman Ins.	$ 2,100.00		
7	Harris Automotive	$ 2,500.00		
8	Michales & Smith	$ 1,100.00		
9	Rogers Inc.	$ 1,100.00		
10	XYZ Company	$ 2,100.00		
11	Grand Total	$ 10,100.00		
12				
13				
14				
15				
16				

Or figure out your Sales Person Commission payout for the whole spreadsheet:

	A	B
2	Sales	(All)
4	**Row Labels**	**Sum of Commission**
5	Anderson	$ 104.50
6	Barkley	$ 77.00
7	Henderson	$ 120.00
8	Jones	$ 35.00
9	Reynolds	$ 20.00
10	Ryan	$ 24.00
11	Sanders	$ 27.50
12	Smith	$ 24.00
13	**Grand Total**	**$ 432.00**

And this is just scratching the surface of the different reports you can produce. Let's say you wanted an interactive Pivot Table with various fields:

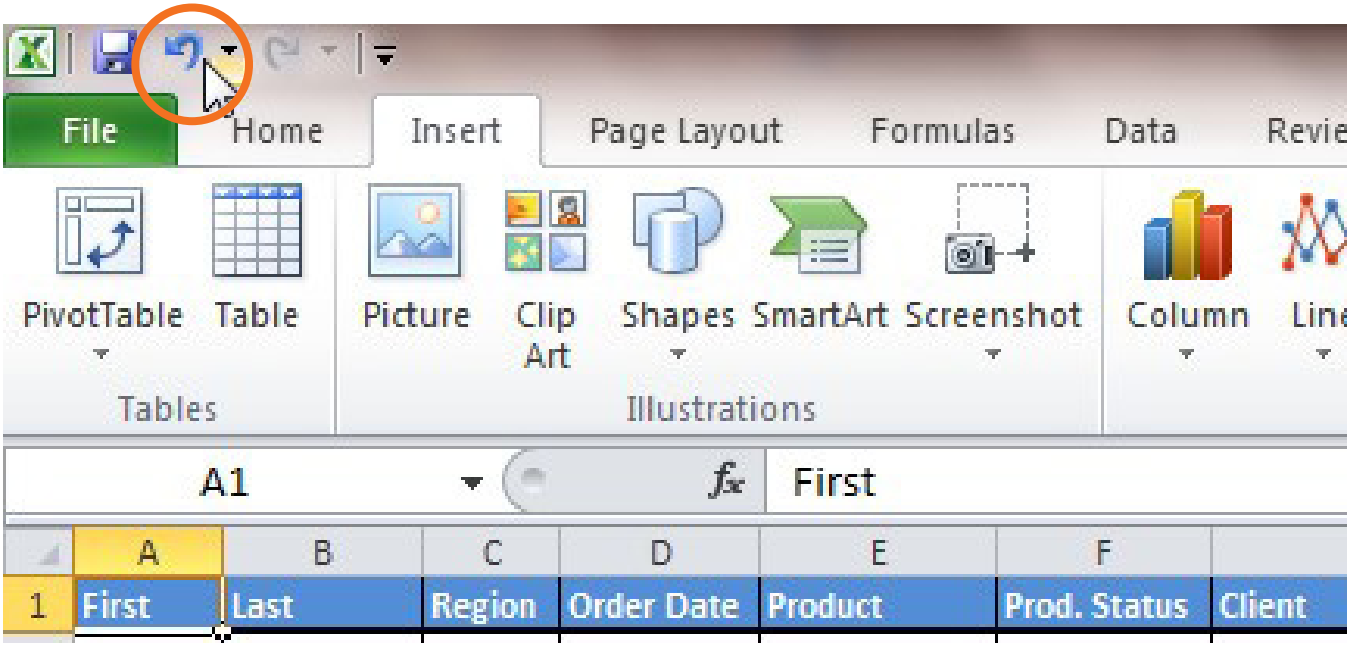


Sales	(All)					
Region	(All)					
Sum of Sales	Column Labels					
Row Labels	Paper Clips	Pens	Pinter Paper	Printer Paper	Staples	Grand Total
ABC Company		$200.00			$1,000.00	$ 1,200.00
Coleman Ins.		$100.00	$ 750.00	$ 750.00	$ 500.00	$ 2,100.00
Harris Automotive	$ 1,000.00		$ 750.00	$ 750.00		$ 2,500.00
Michales & Smith	$ 500.00	$100.00			$ 500.00	$ 1,100.00
Rogers Inc.	$ 500.00	$100.00			$ 500.00	$ 1,100.00
XYZ Company		$100.00	$ 750.00	$ 750.00	$ 500.00	$ 2,100.00
Grand Total	$ 2,000.00	$600.00	$ 2,250.00	$ 2,250.00	$3,000.00	$10,100.00

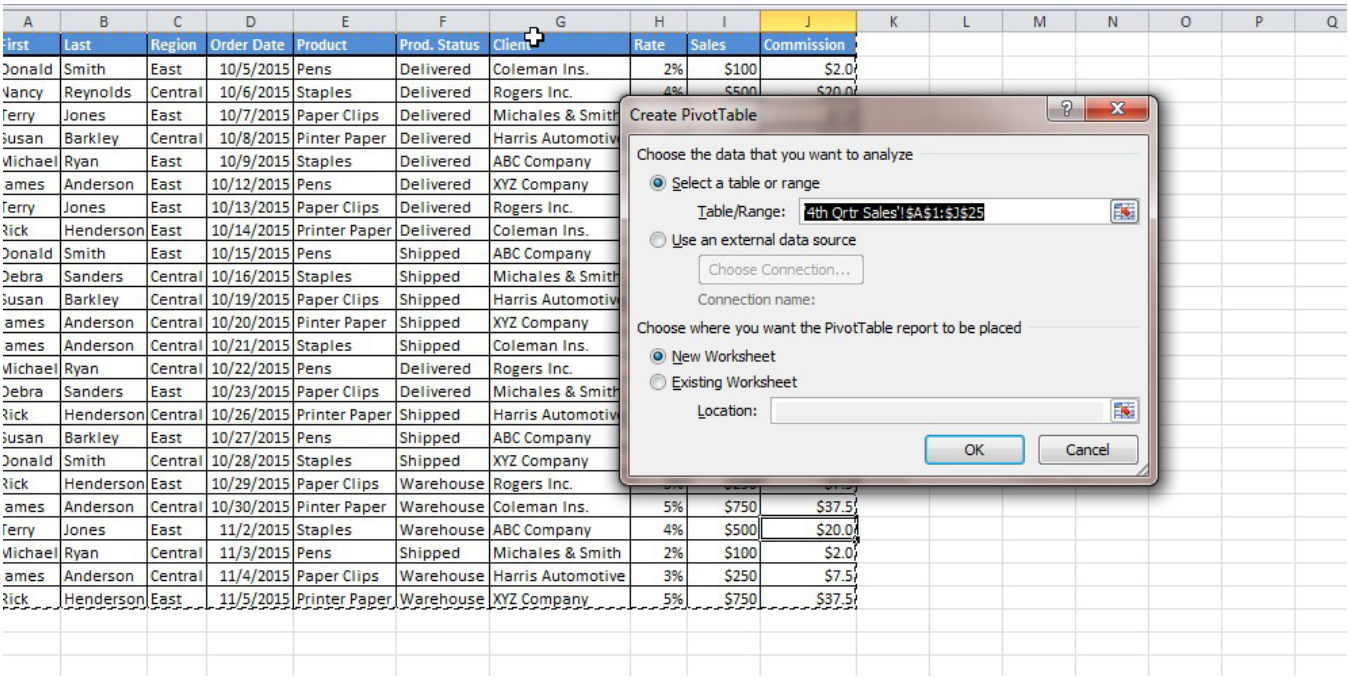
Knowing what you will use the Pivot Table for will help in planning how to create it.

Where to Create a Pivot Table

The Pivot Table tool in Excel is easy to find. From the Home Ribbon, you click on the Insert Table and the Pivot Table tool is in upper right hand corner:



And when you click on Pivot Table, you can customize what appears using the Pivot Table creation tool:



First	Last	Region	Order Date	Product	Prod. Status	Client	Rate	Sales	Commission
Donald	Smith	East	10/5/2015	Pens	Delivered	Coleman Ins.	2%	$100	$2.0
Nancy	Reynolds	Central	10/6/2015	Staples	Delivered	Rogers Inc.	4%	$500	$20.0
Terry	Jones	East	10/7/2015	Paper Clips	Delivered	Michales & Smith			
Susan	Barkley	Central	10/8/2015	Pinter Paper	Delivered	Harris Automotiv			
Michael	Ryan	East	10/9/2015	Staples	Delivered	ABC Company			
ames	Anderson	East	10/12/2015	Pens	Delivered	XYZ Company			
Terry	Jones	East	10/13/2015	Paper Clips	Delivered	Rogers Inc.			
Rick	Henderson	East	10/14/2015	Printer Paper	Delivered	Coleman Ins.			
Donald	Smith	East	10/15/2015	Pens	Shipped	ABC Company			
Debra	Sanders	Central	10/16/2015	Staples	Shipped	Michales & Smith			
Susan	Barkley	Central	10/19/2015	Paper Clips	Shipped	Harris Automotiv			
ames	Anderson	Central	10/20/2015	Pinter Paper	Shipped	XYZ Company			
ames	Anderson	Central	10/21/2015	Staples	Shipped	Coleman Ins.			
Michael	Ryan	Central	10/22/2015	Pens	Delivered	Rogers Inc.			
Debra	Sanders	East	10/23/2015	Paper Clips	Delivered	Michales & Smith			
Rick	Henderson	Central	10/26/2015	Printer Paper	Shipped	Harris Automotiv			
Susan	Barkley	East	10/27/2015	Pens	Shipped	ABC Company			
Donald	Smith	Central	10/28/2015	Staples	Shipped	XYZ Company			
Rick	Henderson	East	10/29/2015	Paper Clips	Warehouse	Rogers Inc.			
ames	Anderson	Central	10/30/2015	Pinter Paper	Warehouse	Coleman Ins.	5%	$750	$37.5
Terry	Jones	East	11/2/2015	Staples	Warehouse	ABC Company	4%	$500	$20.0
Michael	Ryan	Central	11/3/2015	Pens	Shipped	Michales & Smith	2%	$100	$2.0
ames	Anderson	Central	11/4/2015	Paper Clips	Warehouse	Harris Automotive	3%	$250	$7.5
Rick	Henderson	East	11/5/2015	Printer Paper	Warehouse	XYZ Company	5%	$750	$37.5

In Most cases, if you have the cursor in the first cell of your dataset it will automatically select the data range containing that the cell starts.
It will also default to create the Pivot Table on a New Worksheet.

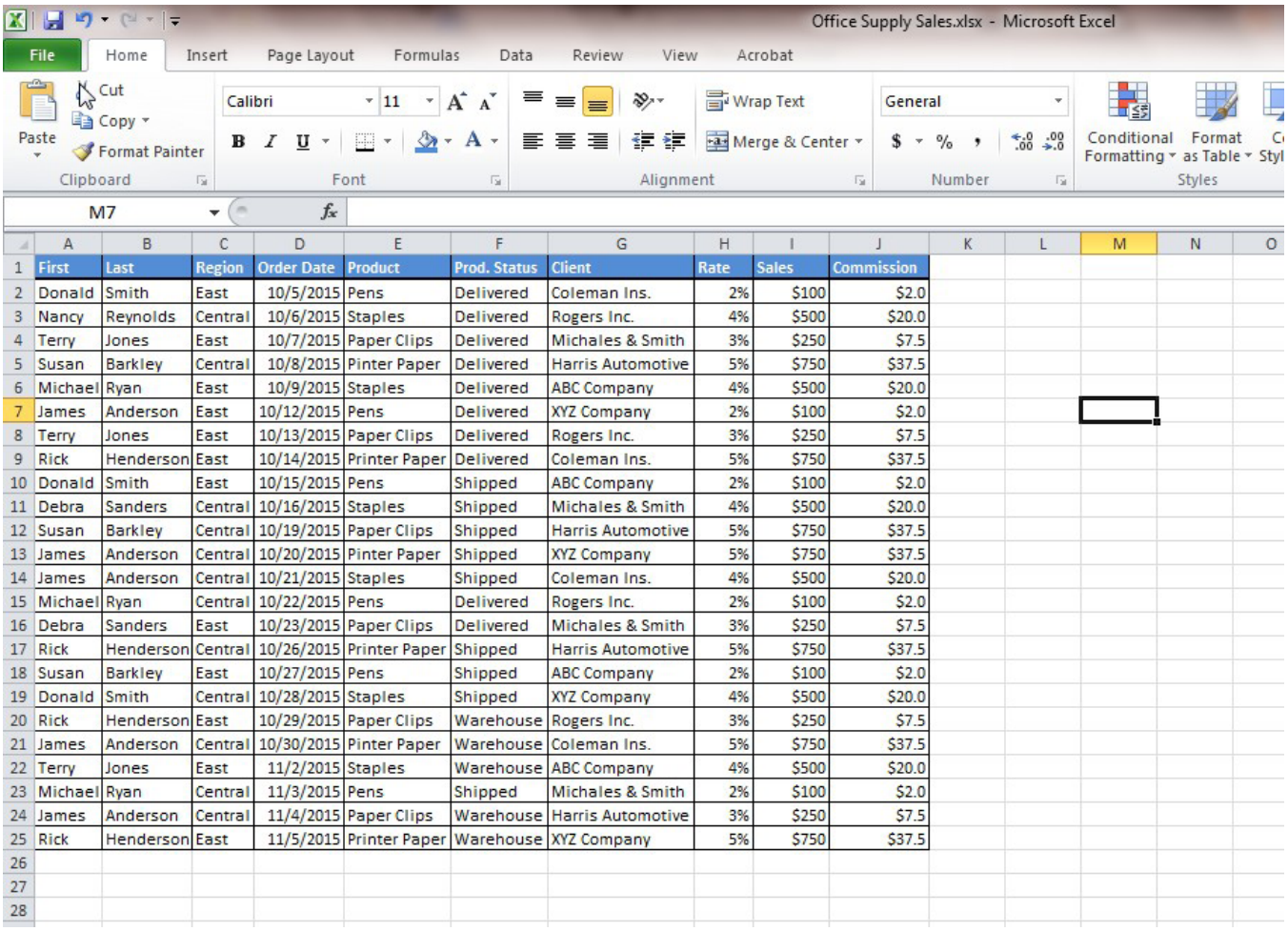
But, you can customize the range and where the Pivot Table will appear.

How to Use Pivot Tables to Produce Reports

Once you understand what Pivot Tables are and why they're used, the next important thing to know is **HOW** to use Pivot Tables.

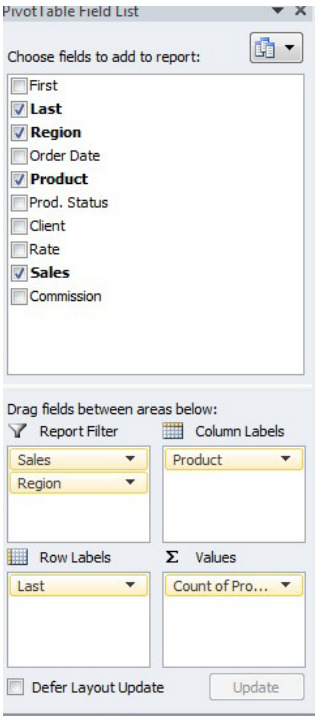
In this particular instance, you are tasked with producing a report to see how many products each salesperson is selling.

So we start with our spreadsheet:



	A	B	C	D	E	F	G	H	I	J
1	First	Last	Region	Order Date	Product	Prod. Status	Client	Rate	Sales	Commission
2	Donald	Smith	East	10/5/2015	Pens	Delivered	Coleman Ins.	2%	$100	$2.0
3	Nancy	Reynolds	Central	10/6/2015	Staples	Delivered	Rogers Inc.	4%	$500	$20.0
4	Terry	Jones	East	10/7/2015	Paper Clips	Delivered	Michales & Smith	3%	$250	$7.5
5	Susan	Barkley	Central	10/8/2015	Pinter Paper	Delivered	Harris Automotive	5%	$750	$37.5
6	Michael	Ryan	East	10/9/2015	Staples	Delivered	ABC Company	4%	$500	$20.0
7	James	Anderson	East	10/12/2015	Pens	Delivered	XYZ Company	2%	$100	$2.0
8	Terry	Jones	East	10/13/2015	Paper Clips	Delivered	Rogers Inc.	3%	$250	$7.5
9	Rick	Henderson	East	10/14/2015	Printer Paper	Delivered	Coleman Ins.	5%	$750	$37.5
10	Donald	Smith	East	10/15/2015	Pens	Shipped	ABC Company	2%	$100	$2.0
11	Debra	Sanders	Central	10/16/2015	Staples	Shipped	Michales & Smith	4%	$500	$20.0
12	Susan	Barkley	Central	10/19/2015	Paper Clips	Shipped	Harris Automotive	5%	$750	$37.5
13	James	Anderson	Central	10/20/2015	Pinter Paper	Shipped	XYZ Company	5%	$750	$37.5
14	James	Anderson	Central	10/21/2015	Staples	Shipped	Coleman Ins.	4%	$500	$20.0
15	Michael	Ryan	Central	10/22/2015	Pens	Delivered	Rogers Inc.	2%	$100	$2.0
16	Debra	Sanders	East	10/23/2015	Paper Clips	Delivered	Michales & Smith	3%	$250	$7.5
17	Rick	Henderson	Central	10/26/2015	Printer Paper	Shipped	Harris Automotive	5%	$750	$37.5
18	Susan	Barkley	East	10/27/2015	Pens	Shipped	ABC Company	2%	$100	$2.0
19	Donald	Smith	Central	10/28/2015	Staples	Shipped	XYZ Company	4%	$500	$20.0
20	Rick	Henderson	East	10/29/2015	Paper Clips	Warehouse	Rogers Inc.	3%	$250	$7.5
21	James	Anderson	Central	10/30/2015	Pinter Paper	Warehouse	Coleman Ins.	5%	$750	$37.5
22	Terry	Jones	East	11/2/2015	Staples	Warehouse	ABC Company	4%	$500	$20.0
23	Michael	Ryan	Central	11/3/2015	Pens	Shipped	Michales & Smith	2%	$100	$2.0
24	James	Anderson	Central	11/4/2015	Paper Clips	Warehouse	Harris Automotive	3%	$250	$7.5
25	Rick	Henderson	East	11/5/2015	Printer Paper	Warehouse	XYZ Company	5%	$750	$37.5

...and then pivot it:



...to produce this report:

A7 fx Barkley

	A	B	C	D	E	F	G
1	Sales	(All)					
2	Region	(All)					
3							
4	Count of Product	Column Labels					
5	Row Labels	Paper Clips	Pens	Pinter Paper	Printer Paper	Staples	Grand Total
6	Anderson	1	1	2		1	5
7	Barkley	1	1	1			3
8	Henderson	1			3		4
9	Jones	2				1	3
10	Reynolds					1	1
11	Ryan		2			1	3
12	Sanders	1				1	2
13	Smith		2			1	3
14	Grand Total	6	6	3	3	6	24
15							
16							
17							
18							

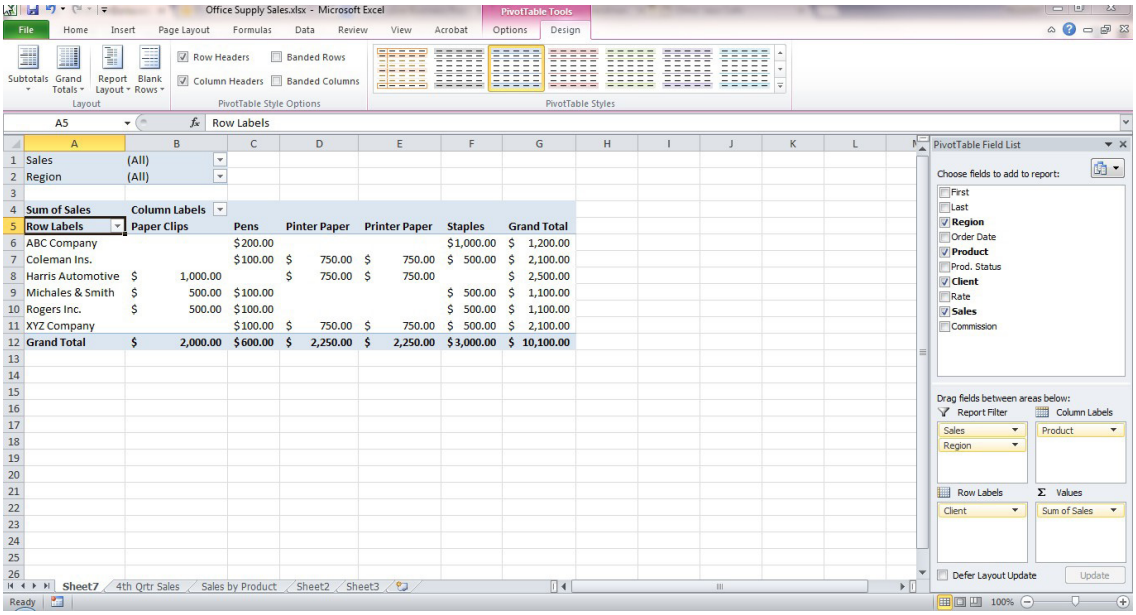
Now you are able to quickly show how many individual products were sold by each individual salesperson.

When to Use Pivot Table

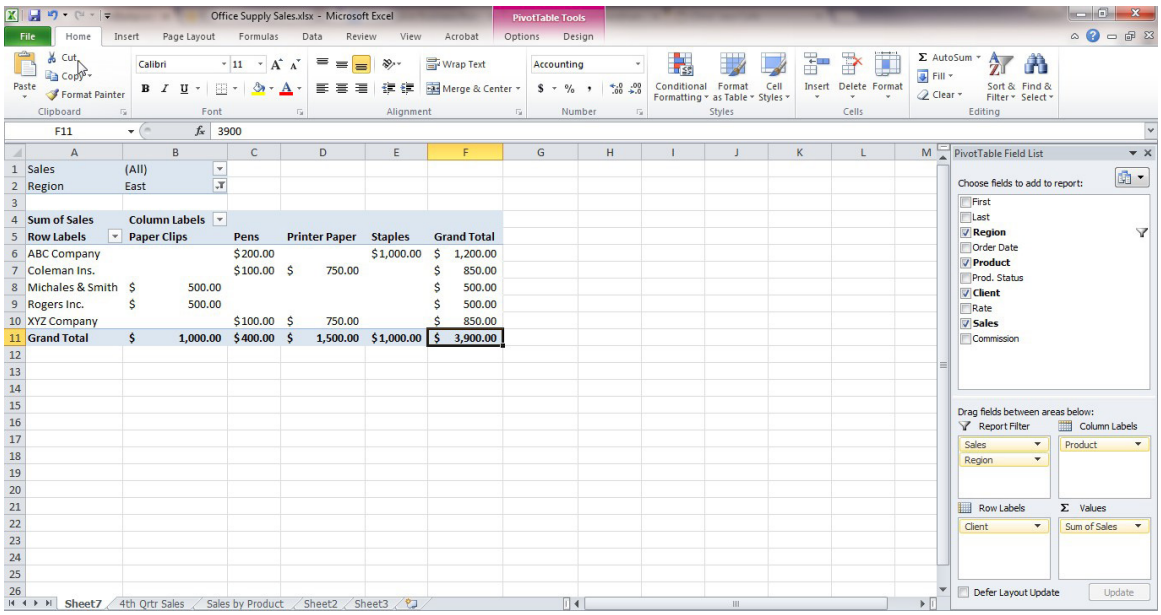
There are many different tools in Excel that help you analyze and dissect data. Knowing when to use Pivot Tables can be hard to determine. In some cases, it is just a matter of personal preference. But there are other times when it is clear that a Pivot Table is the best tool for the job. Here are some general rules on when it is best to use Pivot Tables:

- ✓ When you have a large table of data and want to analyze the data by certain filters.
- ✓ When the data you have contains multiple columns that are, or can be, summed up.
- ✓ When you want to use comparative data
- ✓ When you want to have customizable dropdowns to get the sum of a data range, but also want to be able break it down.

For example, this table gives us total sales by region:



But by using the dropdown in cell B2, we can break that down by region:



Bonus Tips!

Other keys to consider before creating Pivot Tables:

1. Make sure your data is labeled with column headings.
2. Remove any blank columns or rows so all the data appears together
3. Remove any blank cells to reduce blank fields in the pivot table
4. Count your data before creating the pivot table to make sure the pivot table is pulling all of the data
5. Do not sum your data as a the pivot table auto sums and a row or columned of summed data in the source data will throw off the auto calculations in the pivot table **OR**, if you do sum the source date, make sure the sum line isn't included in the data range.

Using Excel in the workplace can be a challenge,
but it can also open new doors to understanding your business.
In addition, great Excel users have an extra tool
to help advance their career.

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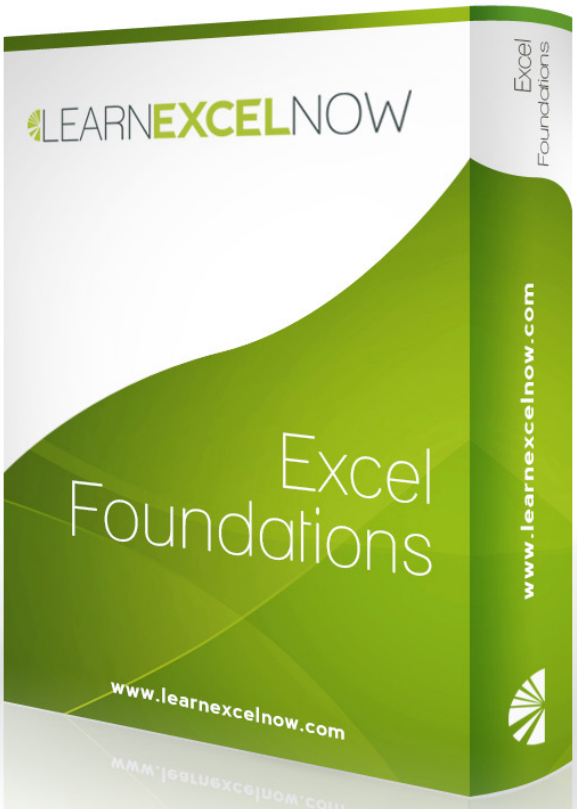

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