PER SCHOLAS

Guided LAB 331.1.4 - Manage Numbers Format in Excel

Lab Overview:

The objective of this lab is to help learners understand and apply various number formats in Excel, such as currency, percentages, and dates. The lab guides users through formatting cells for different data types, ensuring accurate representation and readability of numerical information within Excel spreadsheets.

Learning Objective:

By the end of this lab, learners will be able to:

- Apply different number formats in a spreadsheet to accurately represent and manipulate data such as percentages, currency, times, and dates.
- Select the appropriate format to enhance data clarity and functionality.
- Apply consistent decimal formatting.
- Format currency columns to reflect dollar values.

Workplace Scenario:

Imagine you have been onboarded as a Junior Financial Assistant at “Greenway Tech Solutions.” Your team has just wrapped up data collection for the latest quarterly financial report. Your supervisor has asked you to review the draft spreadsheet and ensure that all number formats are applied correctly before it is shared with clients and uploaded to the company intranet.

This lab will demonstrate how to apply and customize number formats in Excel such as currency, percentages, and dates to ensure data is professionally presented, accurate,

and ready for external reporting.

What are Number Formats?

Whenever you are working with a spreadsheet, use appropriate number formats for your data. Number formats tell your spreadsheet exactly what type of data you are using such as percentages (%), currency ($), times, dates, and so on.

Why use Number Formats?

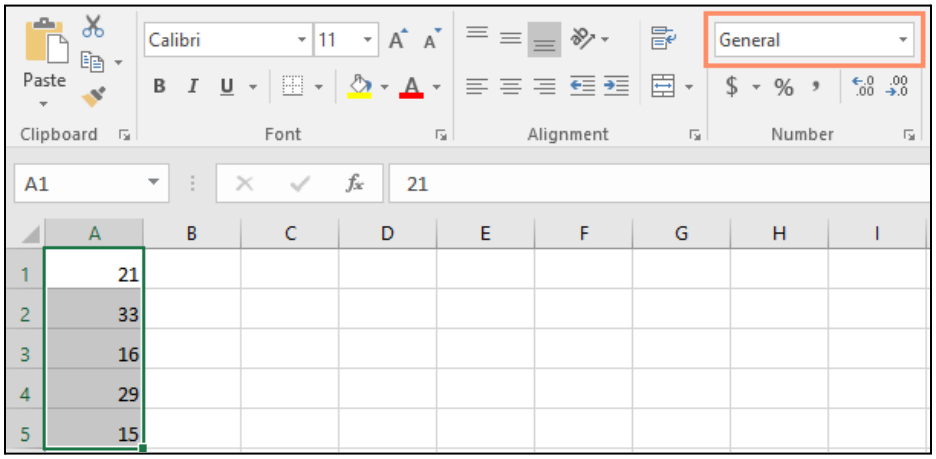
Number formats not only improve the readability of your spreadsheet but also enhance its functionality. By applying a specific number format, you're defining the type of data stored in each cell. For instance, using a date format signals to the spreadsheet that the data represents calendar dates, enabling it to interpret and handle these values accurately. This ensures data consistency and correct calculation of formulas.

Note: If no specific number format is required, the spreadsheet typically defaults to a general format, which may apply minor formatting adjustments to your data.

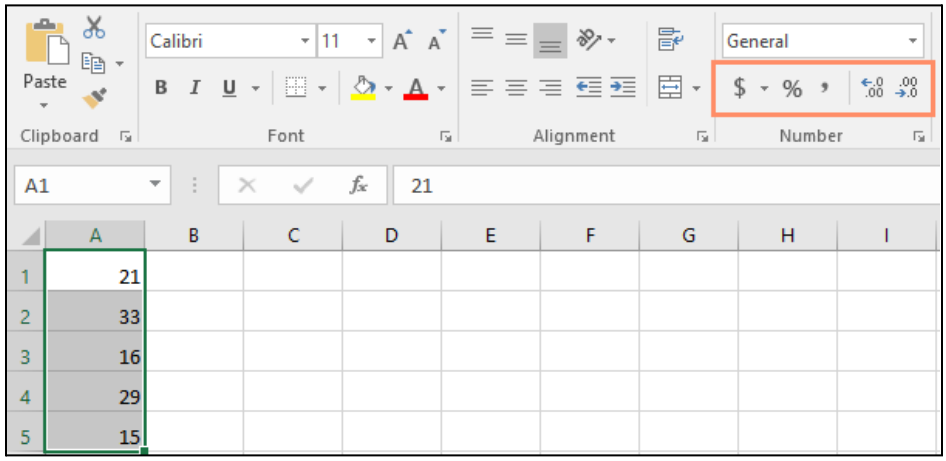
Begin:

There are two main ways to choose a number format:

Option 1: Go to the **Home** tab, click the **Number Format** drop-down menu in the **Number** group, and select the desired format.



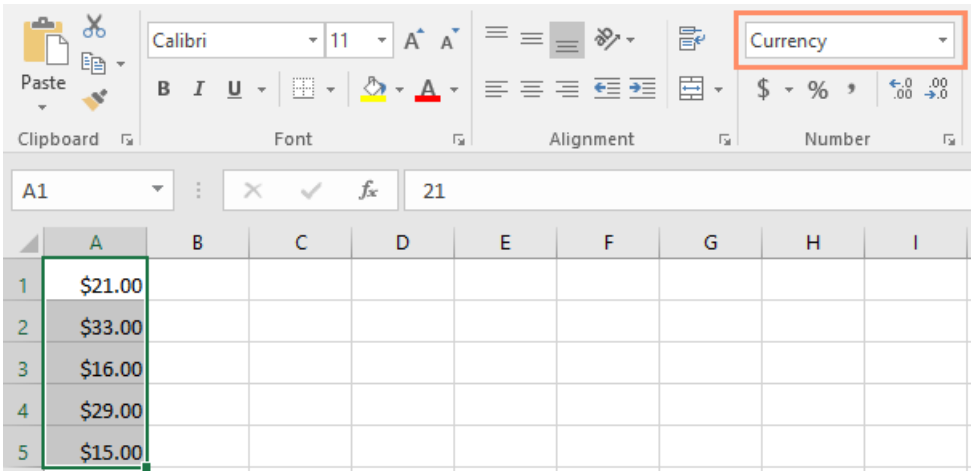
Option 2: Click one of the quick number-formatting commands below the drop-down menu.



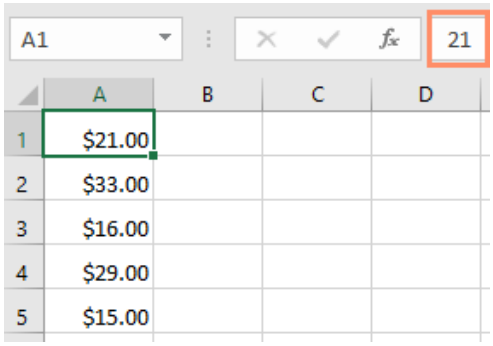
Note: You can also select the desired cells and press Ctrl+1 on your keyboard to access more number-formatting options.

1: `Currency` Format

In the below example, we have applied the `**Currency**` number format, which adds currency **symbols ($)** and displays two decimal places for any numerical values.

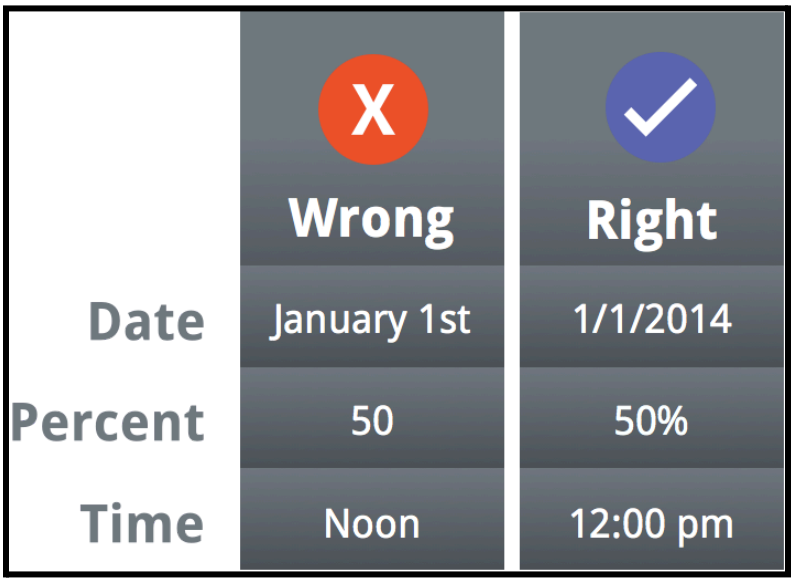


If you select any cells with number formatting, you can see the **actual value** of the cell in the formula bar. The spreadsheet will use this value for formulas and other calculations.



Using number formats correctly

There is more to number formatting than selecting cells and applying a format. Spreadsheets can actually apply a lot of number formatting automatically based on the way you enter data. This means you will need to enter data in a way the program can understand, and then ensure that those cells are using the proper number format. For example, the image below shows how to use number formats correctly for dates, percentages, and times:

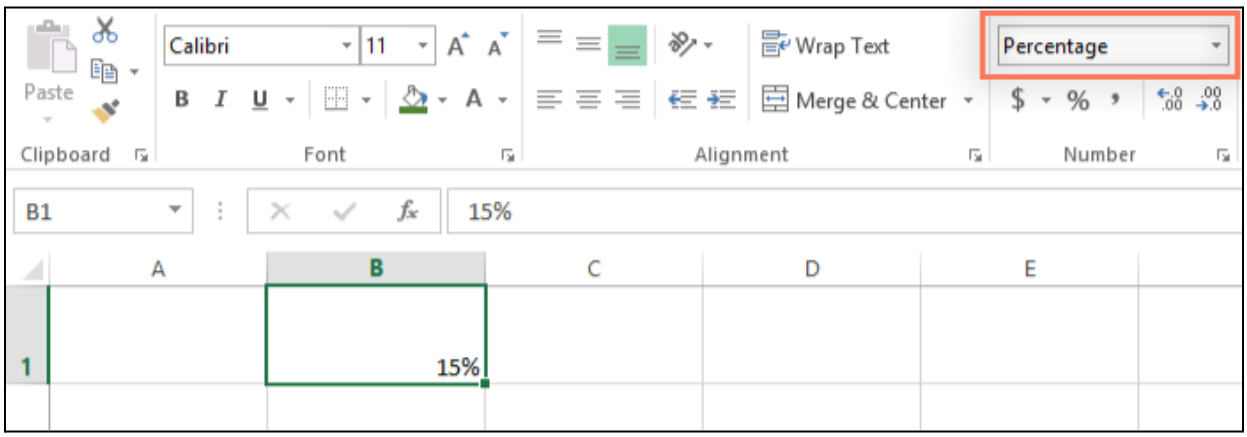


Now that you know more about how number formats work, we will look at a few different number formats in action.

2: Percentage Formats

One of the most helpful number formats is the **percentage** (%) format. It displays values as percentages such as **20%** or **55%**. This is especially helpful when calculating

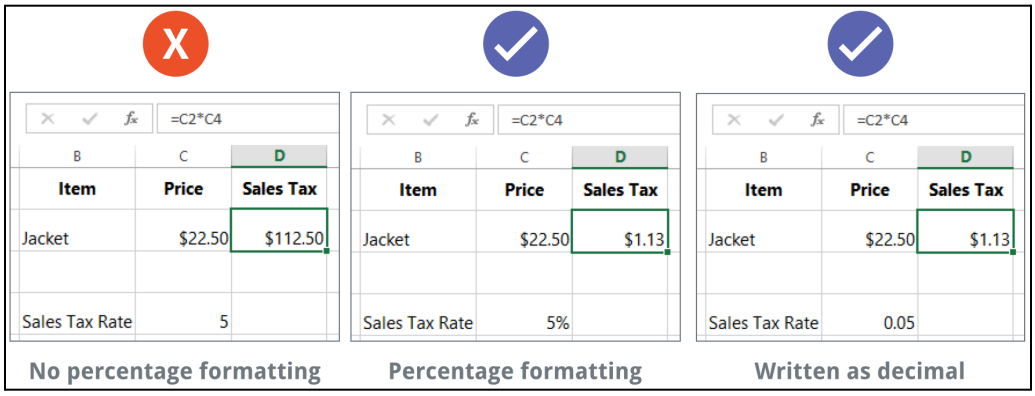
things such as the cost of sales tax or a tip. When you type a **percent sign (%)** after a number, the percentage number format will be applied to that cell **automatically**.



Remember: A percentage can also be written as a **decimal**. So **15% is the same thing as 0.15**, **7.5% is 0.075**, **20% is 0.20**, **55% is 0.55**, and so on.

[Click here to review this concept]

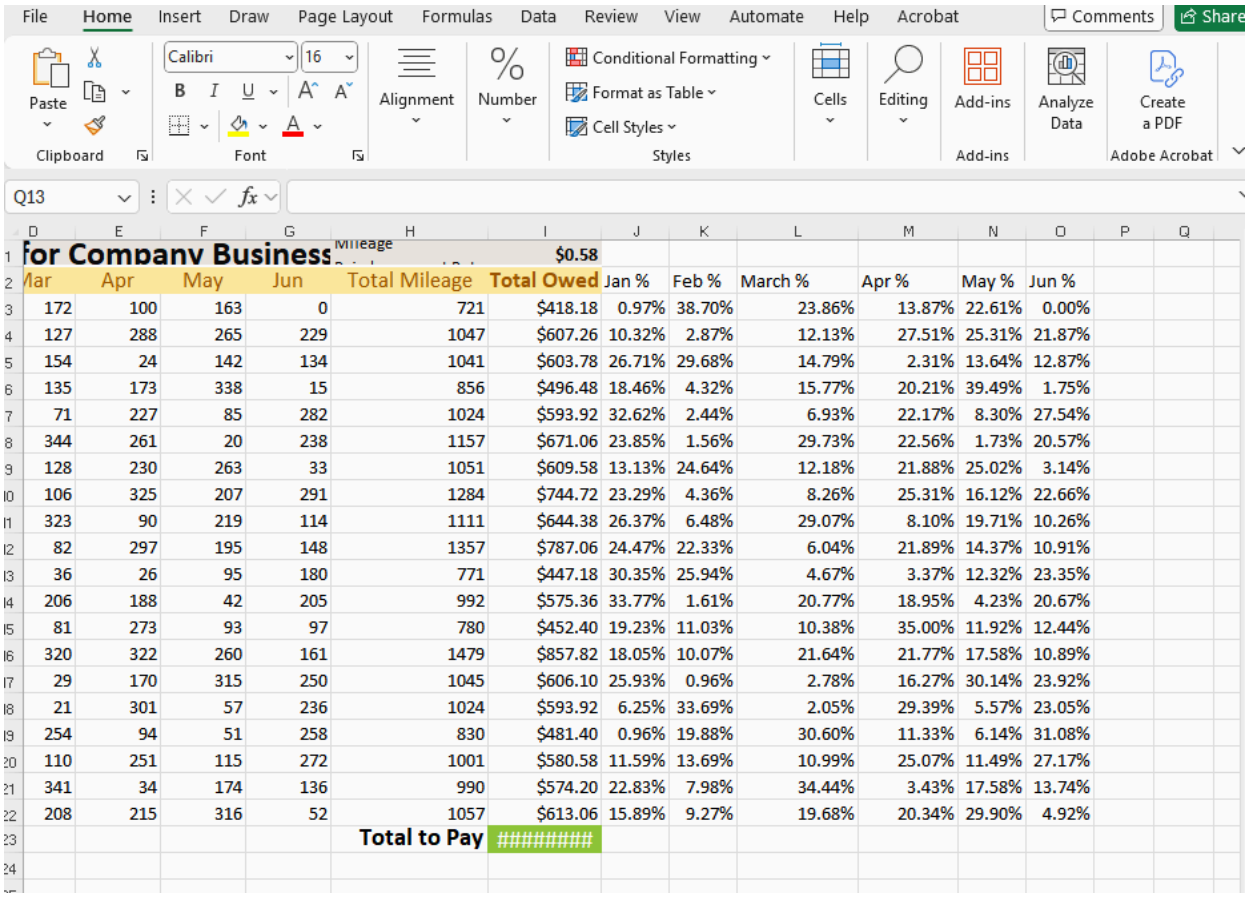
There are many times when percentage formatting will be useful. For example, in the images below, notice how the **sales tax rate** is formatted differently for each spreadsheet (5, 5%, and 0.05):



As you can see, the calculation in the spreadsheet on the left did not work correctly. Without the percentage number format, our spreadsheet thinks we want to multiply

$22.50 by 5, not 5%. And while the spreadsheet on the right still works without percentage formatting, the spreadsheet in the middle is easier to read.

Calculated the percentage, used the absolute reference on the column. The absolute reference was needed for Excel to be able to stay locked on the cell (total mileage).

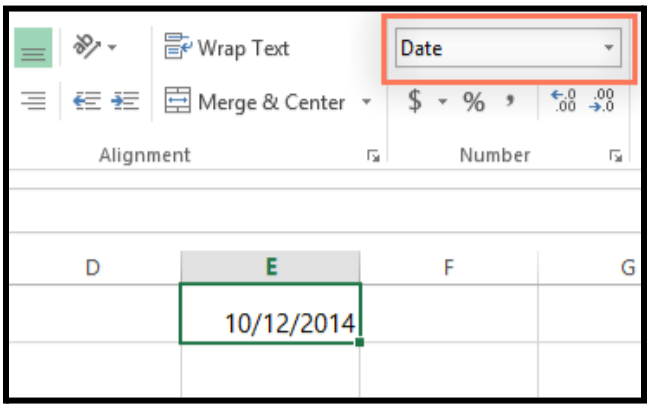


for Company Business				Mileage		$0.58							
Mar	Apr	May	Jun	Total Mileage	Total Owed	Jan %	Feb %	March %	Apr %	May %	Jun %		
172	100	163	0	721	$418.18	0.97%	38.70%	23.86%	13.87%	22.61%	0.00%		
127	288	265	229	1047	$607.26	10.32%	2.87%	12.13%	27.51%	25.31%	21.87%		
154	24	142	134	1041	$603.78	26.71%	29.68%	14.79%	2.31%	13.64%	12.87%		
135	173	338	15	856	$496.48	18.46%	4.32%	15.77%	20.21%	39.49%	1.75%		
71	227	85	282	1024	$593.92	32.62%	2.44%	6.93%	22.17%	8.30%	27.54%		
344	261	20	238	1157	$671.06	23.85%	1.56%	29.73%	22.56%	1.73%	20.57%		
128	230	263	33	1051	$609.58	13.13%	24.64%	12.18%	21.88%	25.02%	3.14%		
106	325	207	291	1284	$744.72	23.29%	4.36%	8.26%	25.31%	16.12%	22.66%		
323	90	219	114	1111	$644.38	26.37%	6.48%	29.07%	8.10%	19.71%	10.26%		
82	297	195	148	1357	$787.06	24.47%	22.33%	6.04%	21.89%	14.37%	10.91%		
36	26	95	180	771	$447.18	30.35%	25.94%	4.67%	3.37%	12.32%	23.35%		
206	188	42	205	992	$575.36	33.77%	1.61%	20.77%	18.95%	4.23%	20.67%		
81	273	93	97	780	$452.40	19.23%	11.03%	10.38%	35.00%	11.92%	12.44%		
320	322	260	161	1479	$857.82	18.05%	10.07%	21.64%	21.77%	17.58%	10.89%		
29	170	315	250	1045	$606.10	25.93%	0.96%	2.78%	16.27%	30.14%	23.92%		
21	301	57	236	1024	$593.92	6.25%	33.69%	2.05%	29.39%	5.57%	23.05%		
254	94	51	258	830	$481.40	0.96%	19.88%	30.60%	11.33%	6.14%	31.08%		
110	251	115	272	1001	$580.58	11.59%	13.69%	10.99%	25.07%	11.49%	27.17%		
341	34	174	136	990	$574.20	22.83%	7.98%	34.44%	3.43%	17.58%	13.74%		
208	215	316	52	1057	$613.06	15.89%	9.27%	19.68%	20.34%	29.90%	4.92%		
				Total to Pay	########								

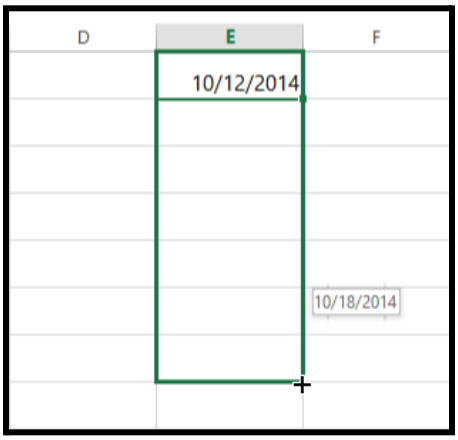
3: Date Formats

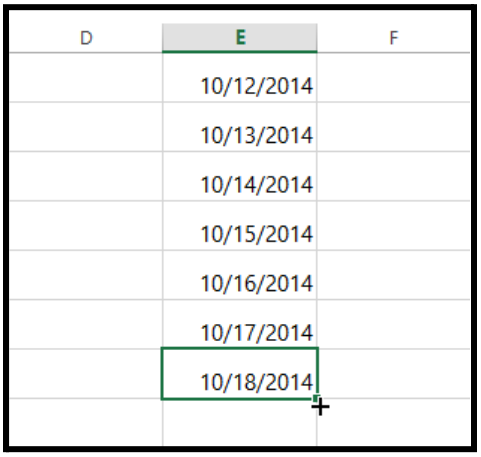
Whenever you are working with **dates**, you will want to use a date format to tell the spreadsheet that you are referring to **specific calendar dates,** such as July 15, 2014. Date formats also allow you to work with a powerful set of date functions that use time and date information to calculate an answer.

Spreadsheets do not understand information the same way a person would. For instance, if you type **October** into a cell, the spreadsheet will not know that you are entering a date, so it will treat it like any other text. Instead, when you enter a date, you will need to use a **specific format** your spreadsheet understands, such as **month/day/year** (or **day/month/year** depending on which country you are in). In the example below, we will type **10/12/2014** for October 12, 2014. Our spreadsheet will then automatically apply the date number format for the cell.

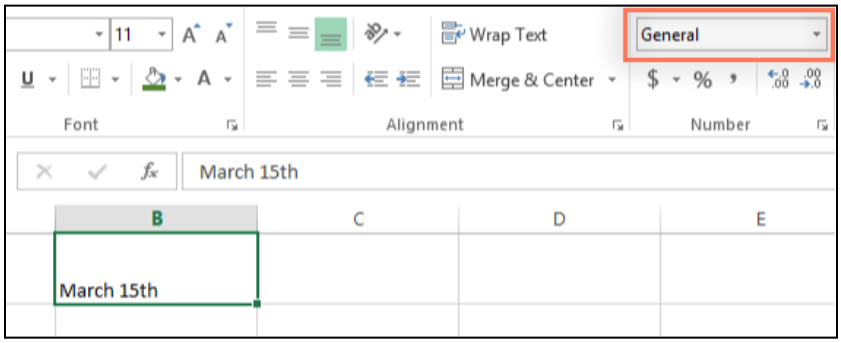


Now that we have our date correctly formatted, we can do many different things with this data. For example, we could use the fill handle to continue the dates through the column, so a different day appears in each cell:





If the date formatting is not applied automatically, it means the spreadsheet did not understand the data you entered. In the example below, we have typed **March 15th**. The spreadsheet did not understand that we were referring to a date, so this cell is still using the **general** number format.



On the other hand, if we type **March 15** (without the "th"), the spreadsheet **will** recognize it as a date. Because it does not include a year, the spreadsheet will automatically add the current year, so the date will have all of the necessary information. We could also type the date several other ways such as **3/15**, **3/15/2014**, or **March 15 2014**, and the spreadsheet would still recognize it as a date.

Added a mileage log into a detailed breakdown on how many miles the employees drove on the 15th of every month by dividing their total monthly mileage by the number

of days in that month. Instead of entering the calendar dates, I formatted the columns as 15-month, so it could represent mid-month estimates.

Employee	15-Jan	15-Feb	15-Mar	15-Apr	15-May	15-Jun
Takako Windholz	8.96774	9.96774	4.96774	0.77419	4.58065	4.32258
Brooke Beverlin	5.09677	1.19355	4.35484	5.58065	10.90323	0.48387
Zenobia Farah	10.77419	0.80645	2.29032	7.32258	2.74194	9.09677
Catalina Hemby	8.90323	0.58065	11.09677	8.41935	0.64516	7.67742
Kennith Bunton	4.45161	8.35484	4.12903	7.41935	8.48387	1.06452
Keri Hirst	9.64516	1.80645	3.41935	10.48387	6.67742	9.38710
Jodie Madill	9.45161	2.32258	10.41935	2.90323	7.06452	3.67742
Liane Thomas	10.70968	9.77419	2.64516	9.58065	6.29032	4.77419
Duncan Steimle	7.54839	6.45161	1.16129	0.83871	3.06452	5.80645
Marna Degeorge	10.80645	0.51613	6.64516	6.06452	1.35484	6.61290
Jess Hirth	4.83871	2.77419	2.61290	8.80645	3.00000	3.12903
Constance Holtmai	8.61290	4.80645	10.32258	10.38710	8.38710	5.19355
Andres Johannsen	8.74194	0.32258	0.93548	5.48387	10.16129	8.06452
Emeline Devilbiss	2.06452	11.12903	0.67742	9.70968	1.83871	7.61290
Elisa Ehrhart	0.25806	5.32258	8.19355	3.03226	1.64516	8.32258
Clelia Charley	3.74194	4.41935	3.54839	8.09677	3.70968	8.77419
Noel Blumstein	7.29032	2.54839	11.00000	1.09677	5.61290	4.38710
Yolande Lentz	5.41935	3.16129	6.70968	6.93548	10.19355	1.67742

Challenge for the Practice!

Take a moment for this short practice:

Try entering the dates below into a spreadsheet and see if the date format is applied automatically:

- 10/12
- October

- October 12
- October 2016
- 10/12/2016
- October 12, 2016
- 2016
- October 12th

Note: If you want to add the current date to a cell, you can use the Ctrl+; shortcut, as shown in the video below.

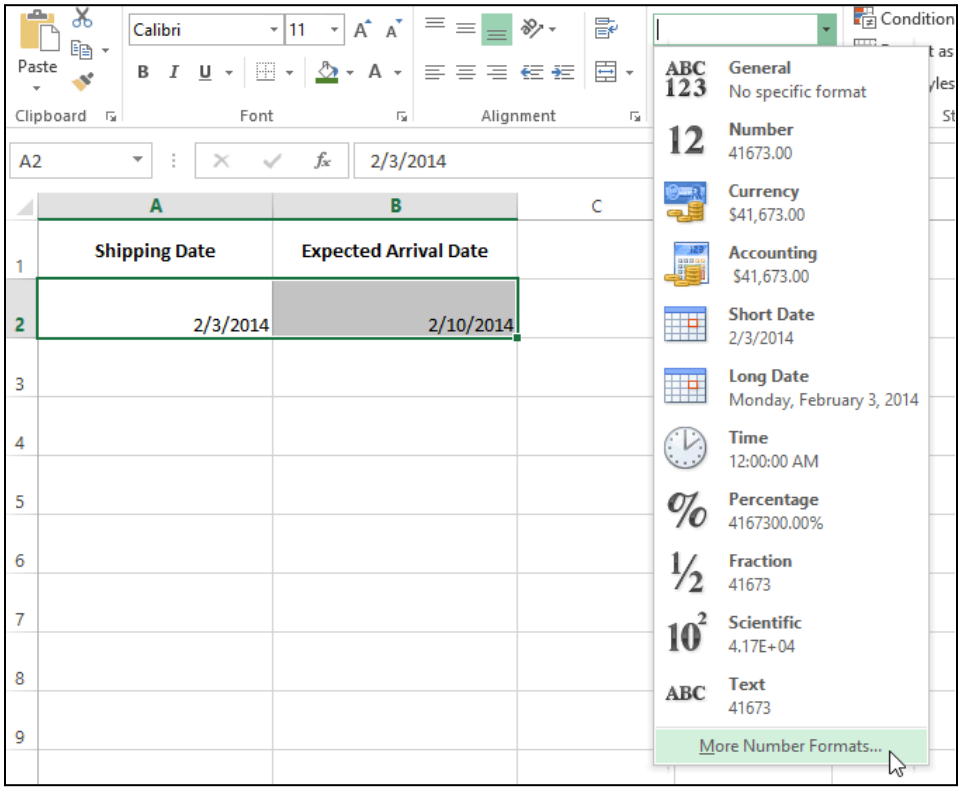
Excel Quick Tip: Add the Current Date to a Cell

My practice:

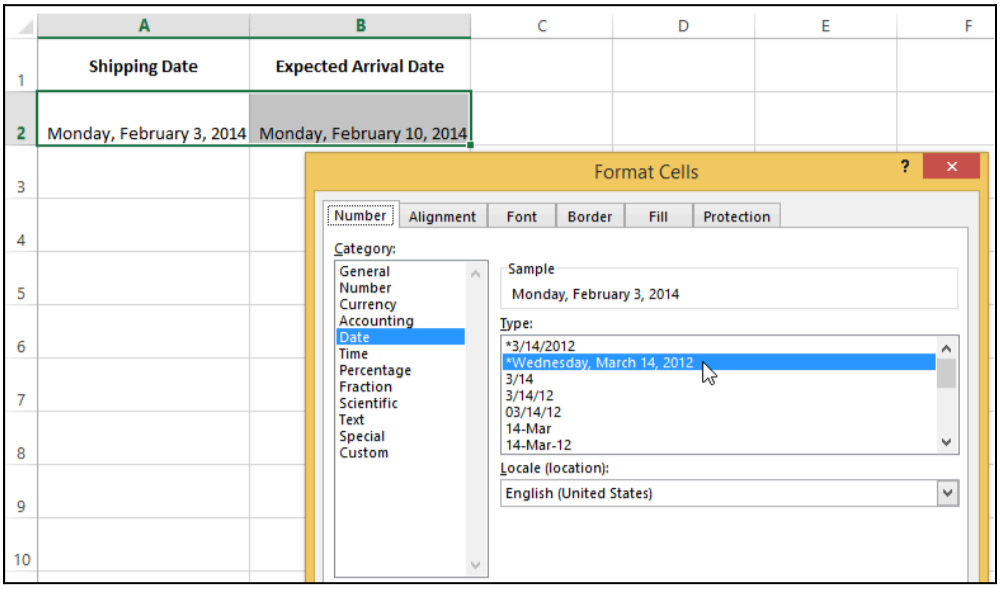
	A	B
1	Date Entries	
2	12-Oct	
3	October	
4	12-Oct	
5	Oct-16	
6	10/12/2016	
7	12-Oct-16	
8	2016	
9	October 12th	
10	12-Oct	
11	12-Oct	
12	12th October 2016	
13	October 12th, 2016	
14		

4: Other Date Formatting Options

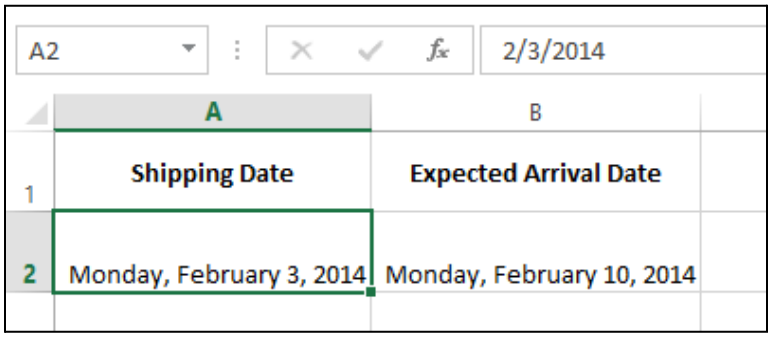
To access other date formatting options, select the **Number Format** drop-down menu and choose **More Number Formats**. These are options to display the date differently such as including the day of the week or omitting the year.



The **Format Cells** dialog box will appear. From here, you can choose the desired date formatting option.



As you can see in the formula bar, a custom date format does not change the actual date in our cell — it just changes the way it is displayed.

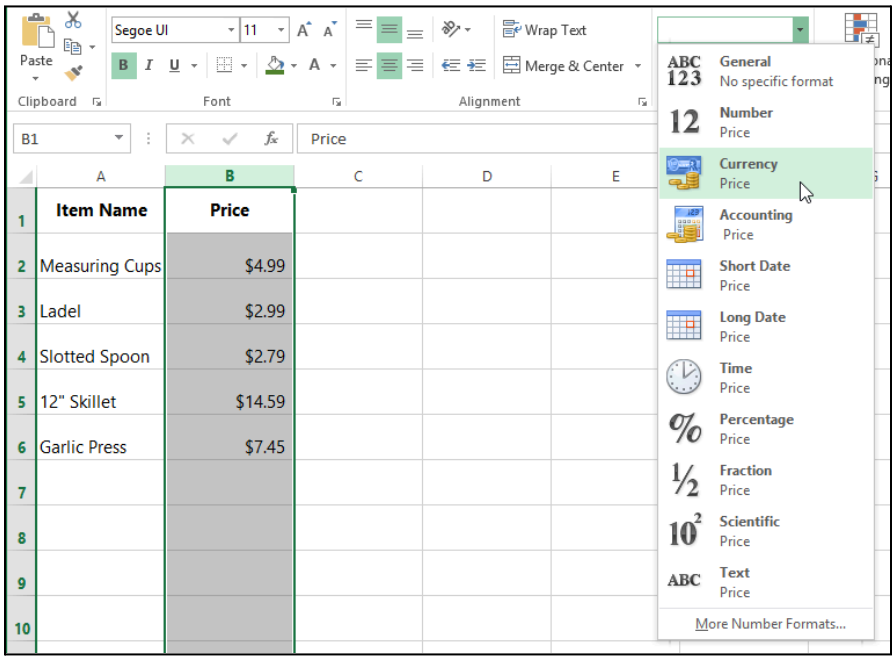


5: Number Formatting Tips

Here are a few tips for getting the best results with number formatting:

Apply number formatting to an entire column: If you are planning to use one column for a certain type of data such as dates or percentages, you may find it

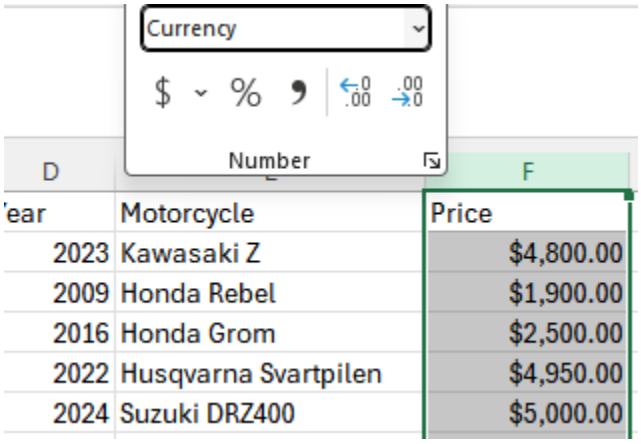
easiest to select the entire column by clicking the column letter and applying the desired number formatting. This way, any data you add to this column in the future will already have the correct number format. Note that the header row will not usually be affected by number formatting.



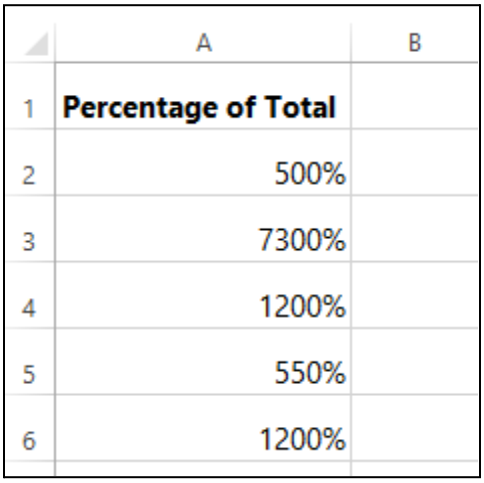
Before:

D	E	F
Year	Motorcycle	Price
2023	Kawasaki Z	4,800
2009	Honda Rebel	1,900
2016	Honda Grom	2,500
2022	Husqvarna Svartpilen	4,950
2024	Suzuki DRZ400	5,000

After:



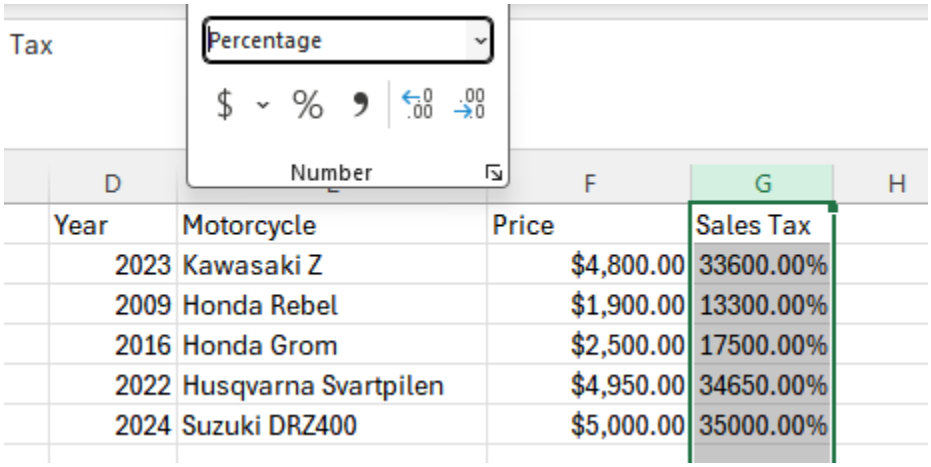
Double-check your values after applying number formatting: If you apply number formatting to existing data, you may have unexpected results. For example, applying `**percentage** (%)` formatting to a cell with a value of 5 will give you 500%, not 5%. In this case, you need to retype the values correctly in each cell.



Before:

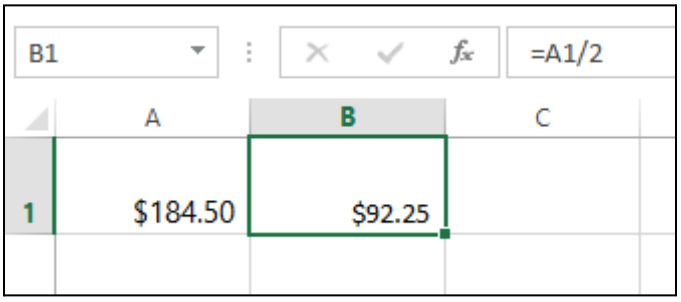
D	E	F	G
Year	Motorcycle	Price	Sales Tax
2023	Kawasaki Z	$4,800.00	$336.00
2009	Honda Rebel	$1,900.00	$133.00
2016	Honda Grom	$2,500.00	$175.00
2022	Husqvarna Svartpilen	$4,950.00	$346.50
2024	Suzuki DRZ400	$5,000.00	$350.00

After:



If you reference a cell with number formatting in a formula, the spreadsheet may automatically apply the same number formatting to the new cell. For example, if you use a value with currency formatting in a formula, the calculated value will

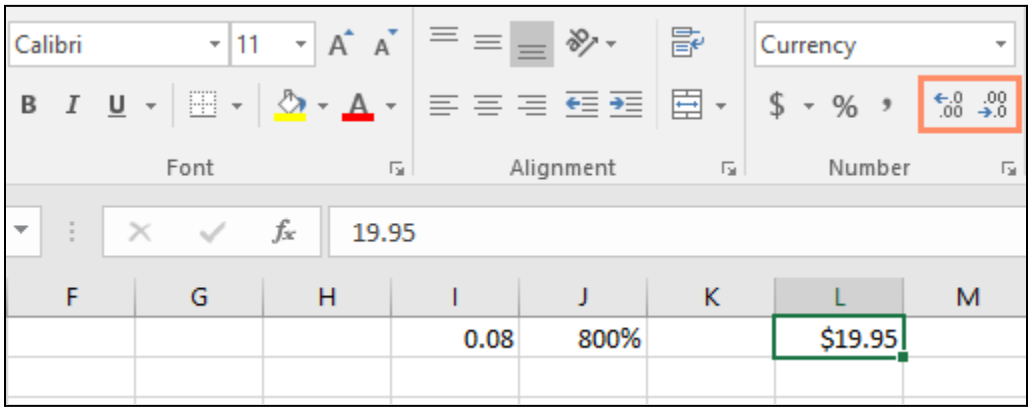
also use the currency number format.



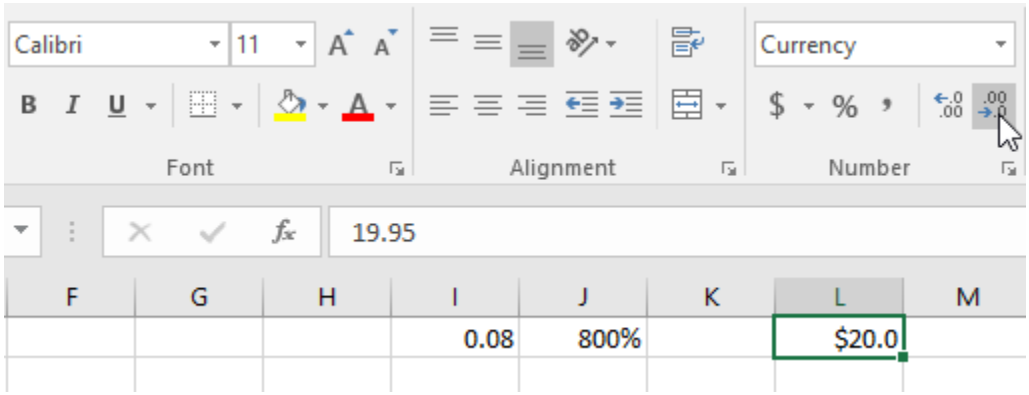
If you want your data to appear **exactly as entered,** you will need to use the **text** number format. This format is especially good for numbers you do not want to perform calculations with such as phone numbers, zip codes, or numbers that begin with 0 such as **02415**. For best results, you may want to apply the text number format before entering data into these cells.

6: Increase and Decrease `Decimal`

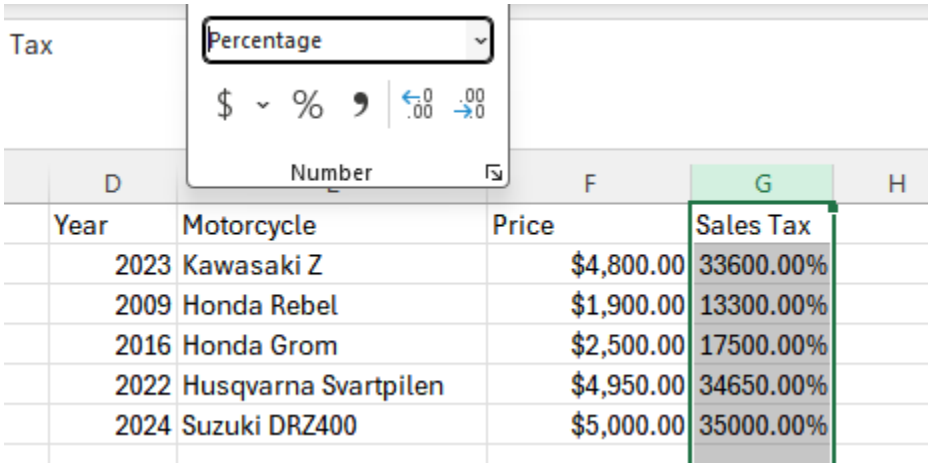
The **Increase Decimal** and **Decrease Decimal** commands allow you to control how many decimal places are displayed in a cell. These commands do not change the value of the cell; instead, they display the value to a set number of decimal places.



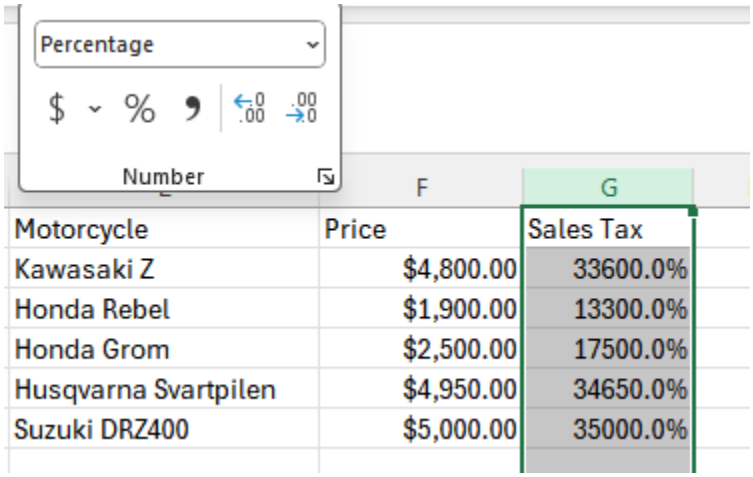
Decreasing the decimal will display the value rounded to that decimal place, but the actual value in the cell will still be displayed in the formula bar.



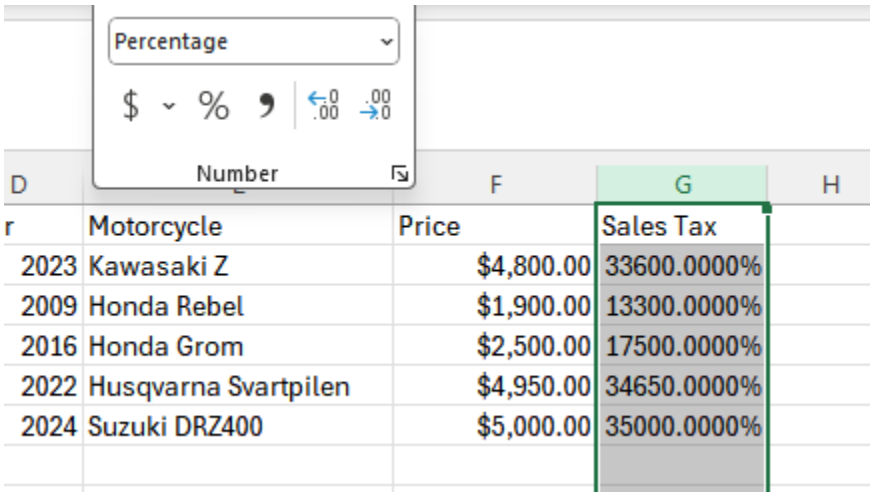
Before:



After (decreasing the decimal):



After (increasing the decimal):



Note: *The* ***Increase/Decrease Decimal*** *commands do not work with some number formats such as* ***Date*** *and* ***Fraction****.*

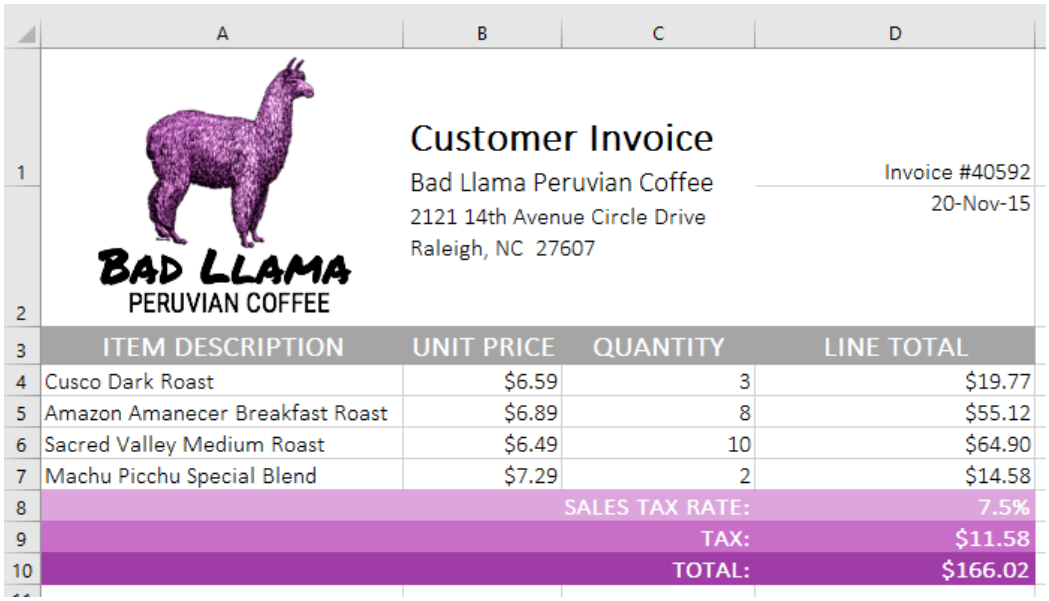
Challenge for the Practice

It is Your Turn!

Challenge Task

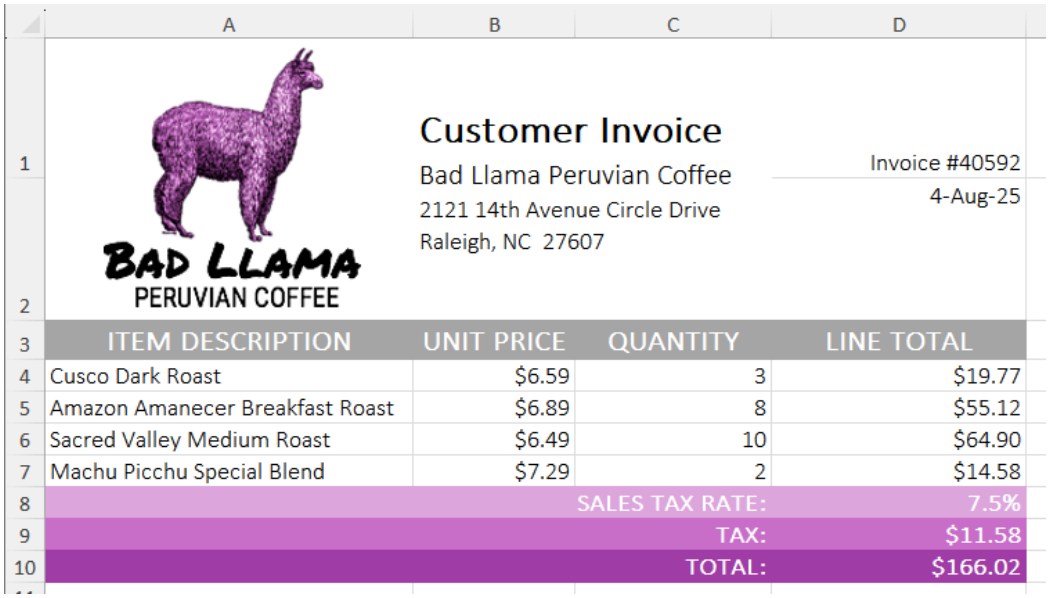
1. Click here to download the sample **workbook**.
2. In cell **D2**, type today's date and press **Enter**.
3. Click cell **D2** and verify that it is using a `**Date**` number format. Try changing it to a different date format (for example, **Long Date**).
4. In cell **D2**, use the **Format Cells** dialog box to choose the **14-Mar-12** date format.
5. Change the sales tax rate in cell **D8** to the `**Percentage**` format.
6. Apply the `**Currency**` format to all of **column B**.
7. In cell **D8**, use the **Increase Decimal** or **Decrease Decimal** command to change the number of decimal places to **one**. It should now display **7.5%**.

8. Upon completing the task, your workbook should resemble the screenshot provided below.



	A	B	C	D
1	BAD LLAMA PERUVIAN COFFEE	Customer Invoice		Invoice #40592
2		Bad Llama Peruvian Coffee 2121 14th Avenue Circle Drive Raleigh, NC 27607		20-Nov-15
3	ITEM DESCRIPTION	UNIT PRICE	QUANTITY	LINE TOTAL
4	Cusco Dark Roast	$6.59	3	$19.77
5	Amazon Amanecer Breakfast Roast	$6.89	8	$55.12
6	Sacred Valley Medium Roast	$6.49	10	$64.90
7	Machu Picchu Special Blend	$7.29	2	$14.58
8			SALES TAX RATE:	7.5%
9			TAX:	$11.58
10			TOTAL:	$166.02

My practice screenshot:



	A	B	C	D
1	BAD LLAMA PERUVIAN COFFEE	Customer Invoice Bad Llama Peruvian Coffee 2121 14th Avenue Circle Drive Raleigh, NC 27607		Invoice #40592 4-Aug-25
2				
3	ITEM DESCRIPTION	UNIT PRICE	QUANTITY	LINE TOTAL
4	Cusco Dark Roast	$6.59	3	$19.77
5	Amazon Amanecer Breakfast Roast	$6.89	8	$55.12
6	Sacred Valley Medium Roast	$6.49	10	$64.90
7	Machu Picchu Special Blend	$7.29	2	$14.58
8			SALES TAX RATE:	7.5%
9			TAX:	$11.58
10			TOTAL:	$166.02

Submission Guideline:

- Include the following deliverables in your submission:
- Take a screenshot of your worksheets. Submit your source file, including a screenshot. Use the **Start Assignment** button in the top-right corner of the Assignment page in Canvas.