

MICROSOFT EXCEL



Relative and Absolute References

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Introduction

- There are two types of cell references: **relative** and **absolute**. Relative and absolute references behave differently when copied and filled to other cells.
- Relative references **change** when a formula is copied to another cell.
- Absolute references, on the other hand, remain **constant** no matter where they are copied.

Relative references

- By default, all cell references are **relative references**. When copied across multiple cells, they change based on the relative position of rows and columns. For example, if you copy the formula **=A1+B1** from row 1 to row 2, the formula will become **=A2+B2**. Relative references are especially convenient whenever you need to repeat the same calculation across multiple rows or columns.

Using relative references

- In the following example, we want to create a formula that will multiply each item's **price** by the **quantity**. Instead of creating a new formula for each row, we can create a single formula in cell **D2** and then copy it to the other rows. We'll use relative references so the formula calculates the total for each item correctly.

6

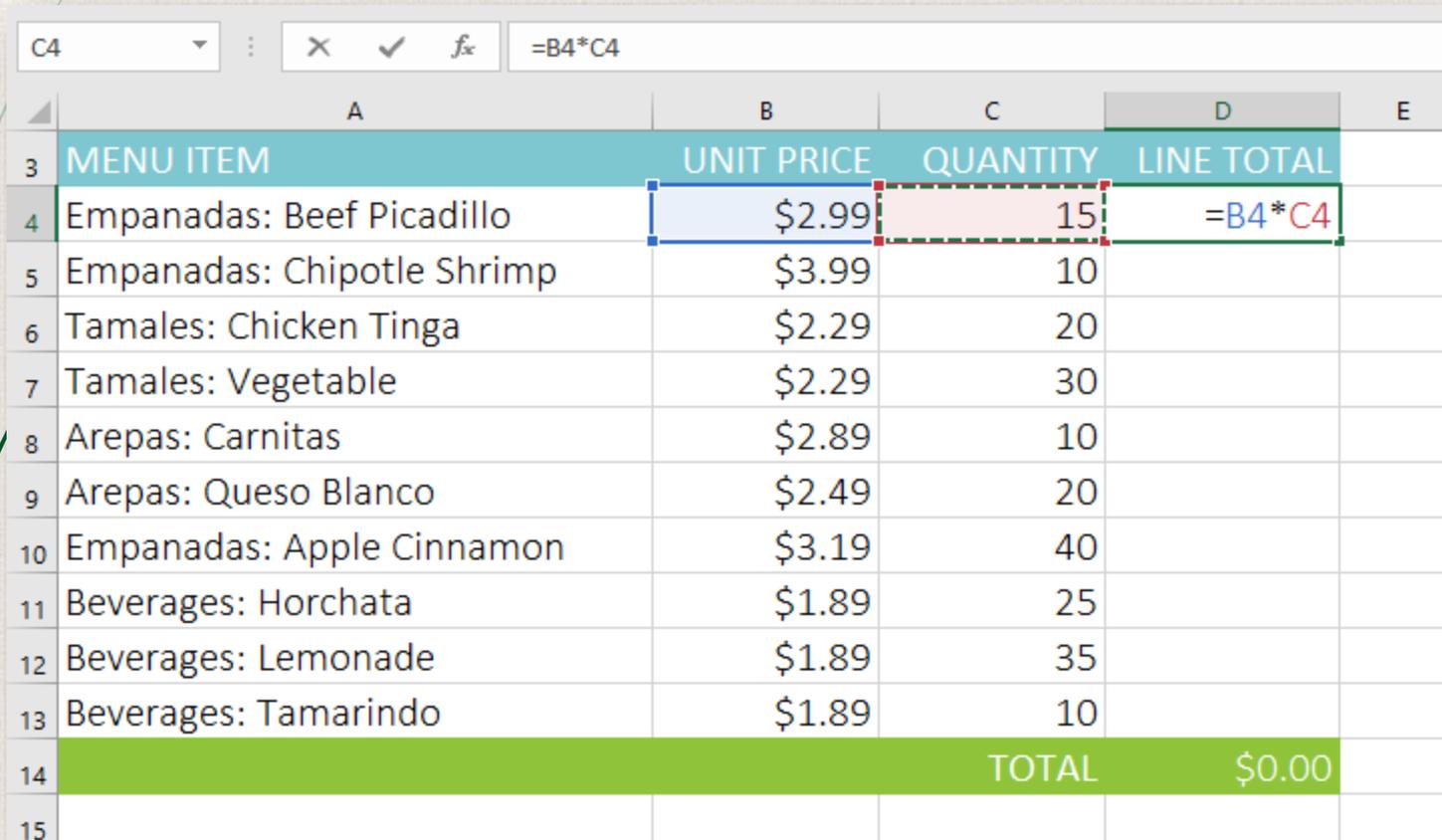
Using relative references

1. Select the **cell** that will contain the formula. In our example, we'll select cell **D4**.

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	+	
5	Empanadas: Chipotle Shrimp	\$3.99	10		
6	Tamales: Chicken Tinga	\$2.29	20		
7	Tamales: Vegetable	\$2.29	30		
8	Arepas: Carnitas	\$2.89	10		
9	Arepas: Queso Blanco	\$2.49	20		
10	Empanadas: Apple Cinnamon	\$3.19	40		
11	Beverages: Horchata	\$1.89	25		
12	Beverages: Lemonade	\$1.89	35		
13	Beverages: Tamarindo	\$1.89	10		
14			TOTAL	\$0.00	
15					

7 Using relative references

2. Enter the **formula** to calculate the desired value. In our example, we'll type **=B4*C4**.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	=B4*C4	
5	Empanadas: Chipotle Shrimp	\$3.99	10		
6	Tamales: Chicken Tinga	\$2.29	20		
7	Tamales: Vegetable	\$2.29	30		
8	Arepas: Carnitas	\$2.89	10		
9	Arepas: Queso Blanco	\$2.49	20		
10	Empanadas: Apple Cinnamon	\$3.19	40		
11	Beverages: Horchata	\$1.89	25		
12	Beverages: Lemonade	\$1.89	35		
13	Beverages: Tamarindo	\$1.89	10		
14			TOTAL	\$0.00	
15					

The formula bar at the top shows the formula `=B4*C4` being entered into cell D4. The spreadsheet has a light green header row (row 3) and a light green footer row (row 14). The formula bar also shows a dropdown menu with 'C4' selected and a formula icon.

8 Using relative references

3. Press **Enter** on your keyboard. The formula will be calculated, and the result will be displayed in the cell.
4. Locate the **fill handle** in the bottom-right corner of the desired cell. In our example, we'll locate the fill handle for cell **D4**.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	\$44.85	
5	Empanadas: Chipotle Shrimp	\$3.99	10		
6	Tamales: Chicken Tinga	\$2.29	20		
7	Tamales: Vegetable	\$2.29	30		
8	Arepas: Carnitas	\$2.89	10		
9	Arepas: Queso Blanco	\$2.49	20		
10	Empanadas: Apple Cinnamon	\$3.19	40		
11	Beverages: Horchata	\$1.89	25		
12	Beverages: Lemonade	\$1.89	35		
13	Beverages: Tamarindo	\$1.89	10		
14			TOTAL	\$44.85	
15					

9 Using relative references

5. Click and drag the **fill handle** over the cells you want to fill. In our example, we'll select cells **D5:D13**.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	\$44.85	
5	Empanadas: Chipotle Shrimp	\$3.99	10		
6	Tamales: Chicken Tinga	\$2.29	20		
7	Tamales: Vegetable	\$2.29	30		
8	Arepas: Carnitas	\$2.89	10		
9	Arepas: Queso Blanco	\$2.49	20		
10	Empanadas: Apple Cinnamon	\$3.19	40		
11	Beverages: Horchata	\$1.89	25		
12	Beverages: Lemonade	\$1.89	35		
13	Beverages: Tamarindo	\$1.89	10		
14			TOTAL	\$44.85	
15					

The formula bar shows the formula $=B4*C4$. A green box highlights the range D5:D13, and a red arrow points down from the fill handle at D4.

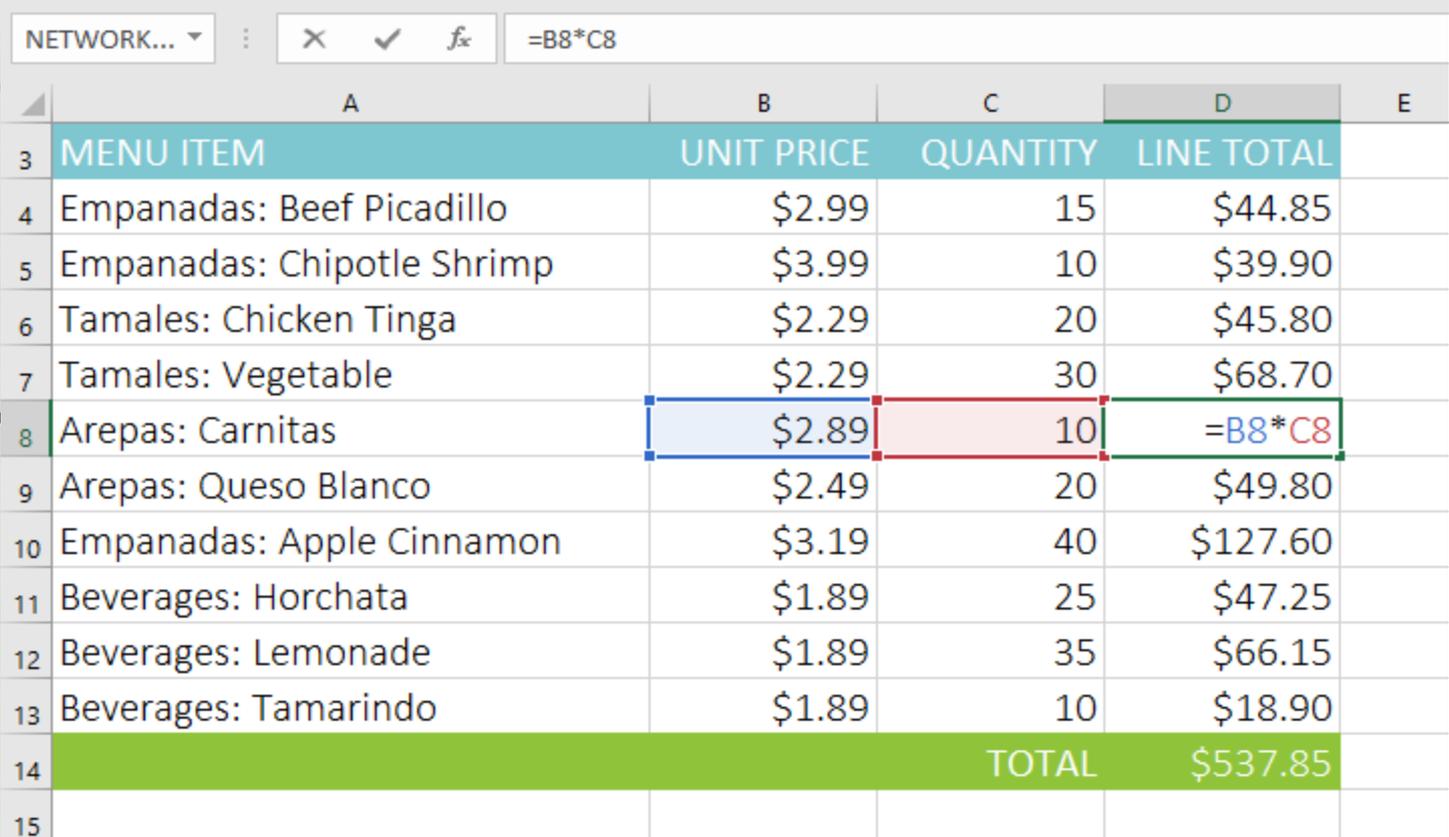
Using relative references

6. Release the mouse. The formula will be **copied** to the selected cells with **relative references**, displaying the result in each cell.

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	\$44.85	
5	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90	
6	Tamales: Chicken Tinga	\$2.29	20	\$45.80	
7	Tamales: Vegetable	\$2.29	30	\$68.70	
8	Arepas: Carnitas	\$2.89	10	\$28.90	
9	Arepas: Queso Blanco	\$2.49	20	\$49.80	
10	Empanadas: Apple Cinnamon	\$3.19	40	\$127.60	
11	Beverages: Horchata	\$1.89	25	\$47.25	
12	Beverages: Lemonade	\$1.89	35	\$66.15	
13	Beverages: Tamarindo	\$1.89	10	\$18.90	
14			TOTAL	\$537.85	
15					

Using relative references

- You can double-click the **filled cells** to check their formulas for accuracy. The relative cell references should be different for each cell, depending on their rows.



NETWORK... : X ✓ fx =B8*C8

	A	B	C	D	E
3	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL	
4	Empanadas: Beef Picadillo	\$2.99	15	\$44.85	
5	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90	
6	Tamales: Chicken Tinga	\$2.29	20	\$45.80	
7	Tamales: Vegetable	\$2.29	30	\$68.70	
8	Arepas: Carnitas	\$2.89	10	=B8*C8	
9	Arepas: Queso Blanco	\$2.49	20	\$49.80	
10	Empanadas: Apple Cinnamon	\$3.19	40	\$127.60	
11	Beverages: Horchata	\$1.89	25	\$47.25	
12	Beverages: Lemonade	\$1.89	35	\$66.15	
13	Beverages: Tamarindo	\$1.89	10	\$18.90	
14			TOTAL	\$537.85	
15					

Absolute references

- There may be a time when you don't want a cell reference to change when copied to other cells. Unlike relative references, **absolute references** do not change when copied or filled. You can use an absolute reference to keep a row and/or column **constant**.
- An absolute reference is designated in a formula by the addition of a **dollar sign (\$)**. It can precede the column reference, the row reference, or both.

\$A\$2	The column and the row do not change when copied
A\$2	The row does not change when copied
\$A2	The column does not change when copied

Absolute references

- ▶ You will generally use the **\$A\$2** format when creating formulas that contain absolute references. The other two formats are used much less frequently.
- ▶ When writing a formula, you can press the **F4** key on your keyboard to switch between relative and absolute cell references. This is an easy way to quickly insert an absolute reference.

Using absolute references

- In the example below, we're going to use cell **E2** (which contains the tax rate at 7.5%) to calculate the sales tax for each item in **column D**. To make sure the reference to the tax rate stays constant—even when the formula is copied and filled to other cells—we'll need to make cell **\$E\$2** an absolute reference.

Using absolute references

1. Select the **cell** that will contain the formula. In our example, we'll select cell **D4**.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15		\$44.85
5	Empanadas: Chipotle Shrimp	\$3.99	10		\$39.90
6	Tamales: Chicken Tinga	\$2.29	20		\$45.80
7	Tamales: Vegetable	\$2.29	30		\$68.70
8	Arepas: Carnitas	\$2.89	10		\$28.90
9	Arepas: Queso Blanco	\$2.49	20		\$49.80
10	Empanadas: Apple Cinnamon	\$3.19	40		\$127.60
11	Beverages: Horchata	\$1.89	25		\$47.25
12	Beverages: Lemonade	\$1.89	35		\$66.15
13	Beverages: Tamarindo	\$1.89	10		\$18.90
14				TOTAL	\$537.85
15					

Using absolute references

2. Enter the **formula** to calculate the desired value. In our example, we'll type **=(B4*C4)*\$E\$2**, making **\$E\$2** an absolute reference.

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	=(B4*C4)*\$E\$2		\$44.85
5	Empanadas: Chipotle Shrimp	\$3.99	10		\$39.90
6	Tamales: Chicken Tinga	\$2.29	20		\$45.80
7	Tamales: Vegetable	\$2.29	30		\$68.70
8	Arepas: Carnitas	\$2.89	10		\$28.90
9	Arepas: Queso Blanco	\$2.49	20		\$49.80
10	Empanadas: Apple Cinnamon	\$3.19	40		\$127.60
11	Beverages: Horchata	\$1.89	25		\$47.25
12	Beverages: Lemonade	\$1.89	35		\$66.15
13	Beverages: Tamarindo	\$1.89	10		\$18.90
14				TOTAL	\$537.85
15					

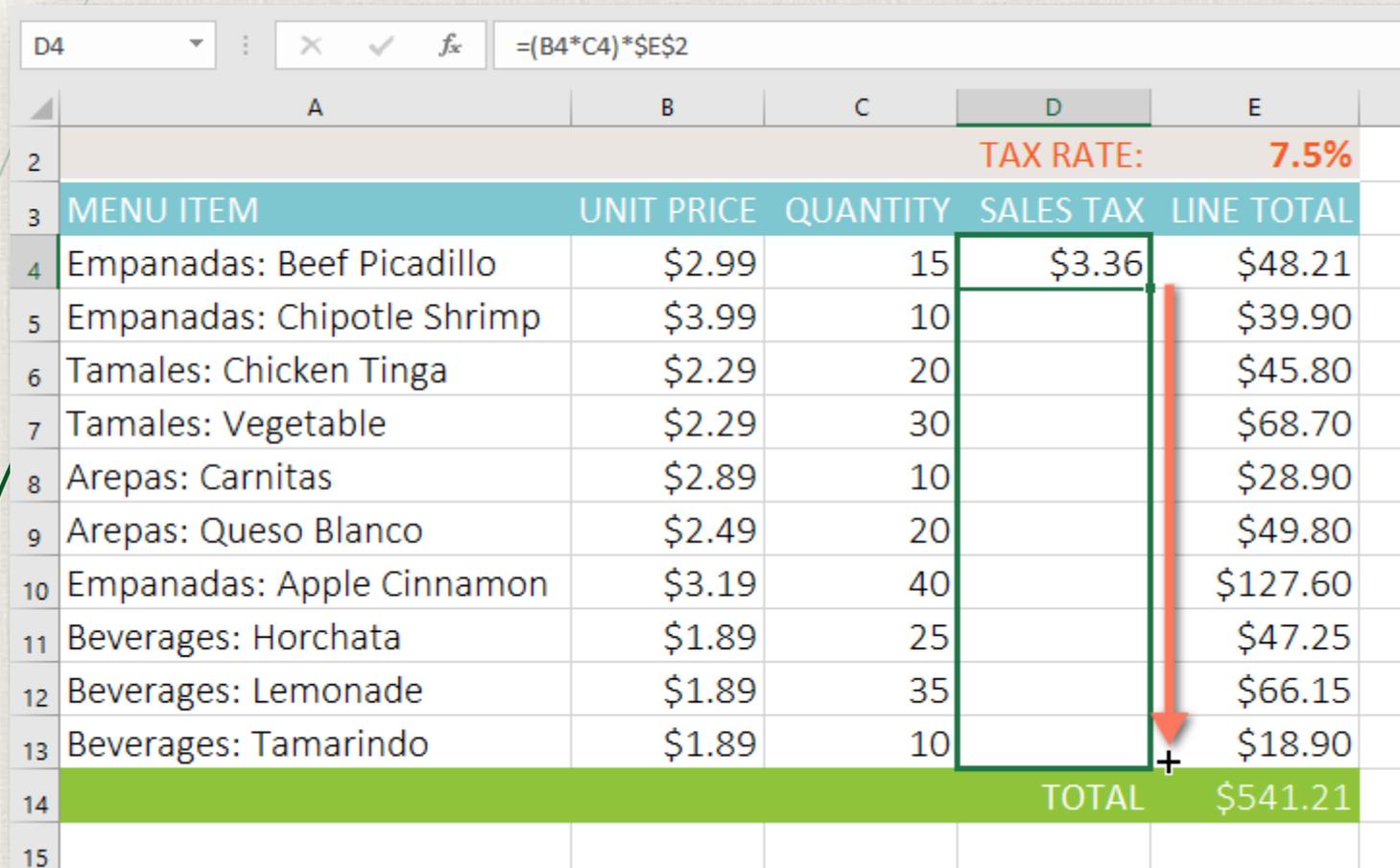
Using absolute references

3. Press **Enter** on your keyboard. The formula will calculate, and the result will display in the cell.
4. Locate the **fill handle** in the bottom-right corner of the desired cell. In our example, we'll locate the fill handle for cell **D4**.

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10		\$39.90
6	Tamales: Chicken Tinga	\$2.29	20		\$45.80
7	Tamales: Vegetable	\$2.29	30		\$68.70
8	Arepas: Carnitas	\$2.89	10		\$28.90
9	Arepas: Queso Blanco	\$2.49	20		\$49.80
10	Empanadas: Apple Cinnamon	\$3.19	40		\$127.60
11	Beverages: Horchata	\$1.89	25		\$47.25
12	Beverages: Lemonade	\$1.89	35		\$66.15
13	Beverages: Tamarindo	\$1.89	10		\$18.90
14				TOTAL	\$541.21
15					

Using absolute references

5. Click and drag the **fill handle** over the cells you want to fill (cells **D5:D13** in our example).



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10		\$39.90
6	Tamales: Chicken Tinga	\$2.29	20		\$45.80
7	Tamales: Vegetable	\$2.29	30		\$68.70
8	Arepas: Carnitas	\$2.89	10		\$28.90
9	Arepas: Queso Blanco	\$2.49	20		\$49.80
10	Empanadas: Apple Cinnamon	\$3.19	40		\$127.60
11	Beverages: Horchata	\$1.89	25		\$47.25
12	Beverages: Lemonade	\$1.89	35		\$66.15
13	Beverages: Tamarindo	\$1.89	10		\$18.90
14				TOTAL	\$541.21
15					

The formula bar shows the formula for cell D4: $= (B4 * C4) * \$E\2 . A green box highlights the range D4:D13, and a red arrow points down from the fill handle in cell D4 to cell D13, indicating the fill operation.

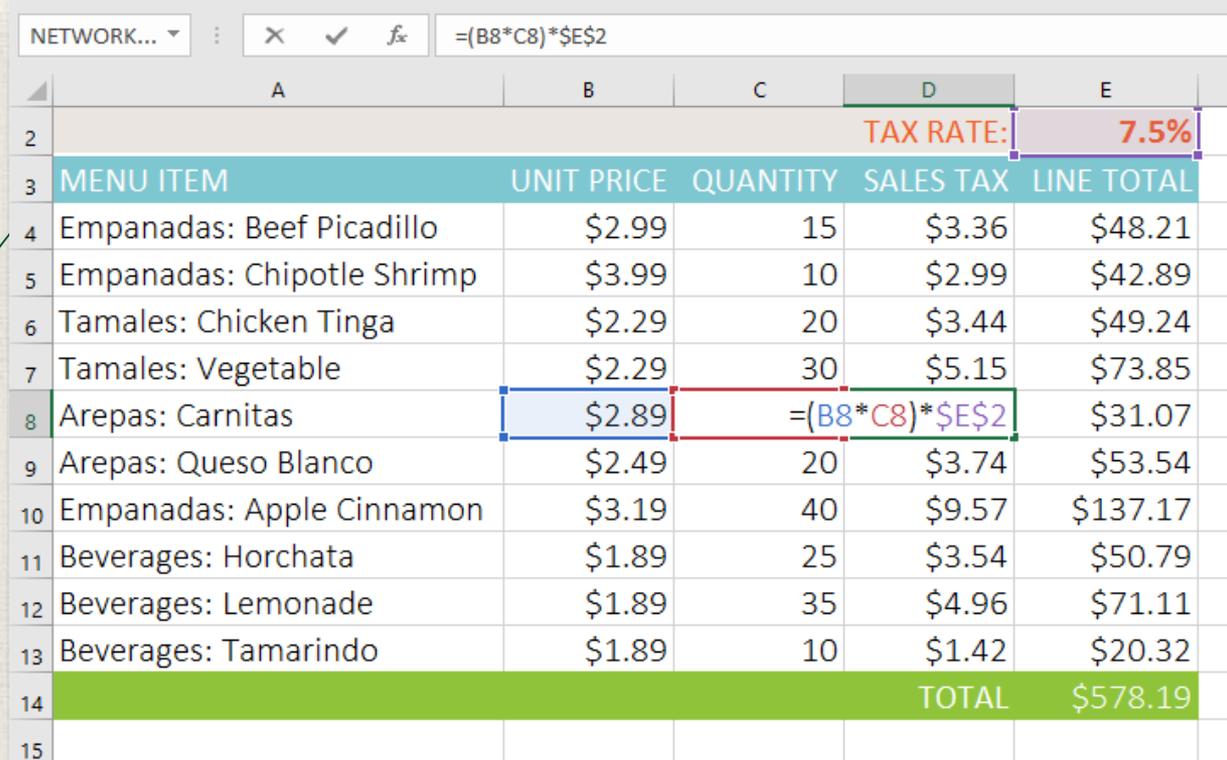
Using absolute references

6. Release the mouse. The formula will be **copied** to the selected cells with an **absolute reference**, and the values will be calculated in each cell.

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10	\$2.99	\$42.89
6	Tamales: Chicken Tinga	\$2.29	20	\$3.44	\$49.24
7	Tamales: Vegetable	\$2.29	30	\$5.15	\$73.85
8	Arepas: Carnitas	\$2.89	10	\$2.17	\$31.07
9	Arepas: Queso Blanco	\$2.49	20	\$3.74	\$53.54
10	Empanadas: Apple Cinnamon	\$3.19	40	\$9.57	\$137.17
11	Beverages: Horchata	\$1.89	25	\$3.54	\$50.79
12	Beverages: Lemonade	\$1.89	35	\$4.96	\$71.11
13	Beverages: Tamarindo	\$1.89	10	\$1.42	\$20.32
14				TOTAL	\$578.19
15					

Using absolute references

- You can double-click the **filled cells** to check their formulas for accuracy. The absolute reference should be the same for each cell, while the other references are relative to the cell's row.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10	\$2.99	\$42.89
6	Tamales: Chicken Tinga	\$2.29	20	\$3.44	\$49.24
7	Tamales: Vegetable	\$2.29	30	\$5.15	\$73.85
8	Arepas: Carnitas	\$2.89	=(B8*C8)*\$E\$2		\$31.07
9	Arepas: Queso Blanco	\$2.49	20	\$3.74	\$53.54
10	Empanadas: Apple Cinnamon	\$3.19	40	\$9.57	\$137.17
11	Beverages: Horchata	\$1.89	25	\$3.54	\$50.79
12	Beverages: Lemonade	\$1.89	35	\$4.96	\$71.11
13	Beverages: Tamarindo	\$1.89	10	\$1.42	\$20.32
14				TOTAL	\$578.19
15					

The formula bar at the top shows the formula for the selected cell: `=(B8*C8)*E2`. The formula uses absolute references for the tax rate cell (\$E\$2) and relative references for the unit price (B8) and quantity (C8) cells.

Using absolute references

- Be sure to include the **dollar sign (\$)** whenever you're making an absolute reference across multiple cells. The dollar signs were omitted in the example below. This caused Excel to interpret it as a **relative reference**, producing an incorrect result when copied to other cells.

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10	#VALUE!	#VALUE!
6	Tamales: Chicken Tinga	\$2.29	20	\$2,208.19	\$2,253.99
7	Tamales: Vegetable	\$2.29	30	#VALUE!	#VALUE!
8	Arepas: Carnitas	\$2.89	30	= (B8*C8)*E6	\$65,169.20
9	Arepas: Queso Blanco	\$2.49	20	#VALUE!	#VALUE!
10	Empanadas: Apple Cinnamon	\$3.19	40	#####	#####
11	Beverages: Horchata	\$1.89	25	#VALUE!	#VALUE!
12	Beverages: Lemonade	\$1.89	35	#####	#####
13	Beverages: Tamarindo	\$1.89	10	#VALUE!	#VALUE!
14				TOTAL	#VALUE!
15					

Using cell references with multiple worksheets

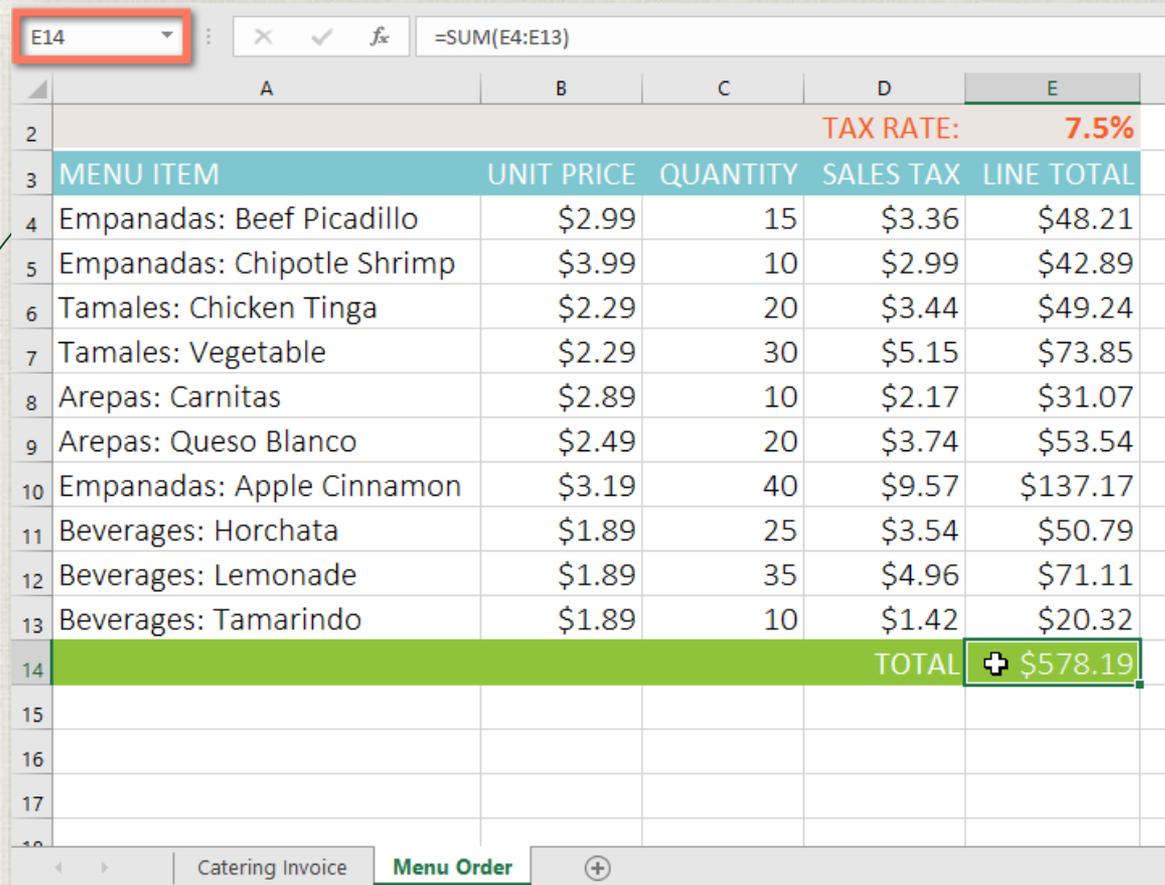
- Excel allows you to refer to any cell on any **worksheet**, which can be especially helpful if you want to reference a specific value from one worksheet to another. To do this, you'll simply need to begin the cell reference with the **worksheet name** followed by an **exclamation point (!)**. For example, if you wanted to reference cell **A1** on **Sheet1**, its cell reference would be **Sheet1!A1**.
- Note that if a worksheet name contains a **space**, you'll need to include **single quotation marks (' ')** around the name. For example, if you wanted to reference cell **A1** on a worksheet named **July Budget**, its cell reference would be **'July Budget'!A1**.

To reference cells across worksheets

- ▶ In our example below, we'll refer to a cell with a calculated value between two worksheets. This will allow us to use the **exact same value** on two different worksheets without rewriting the formula or copying data.

To reference cells across worksheets

1. Locate the cell you want to reference, and note its worksheet. In our example, we want to reference cell **E14** on the **Menu Order** worksheet.



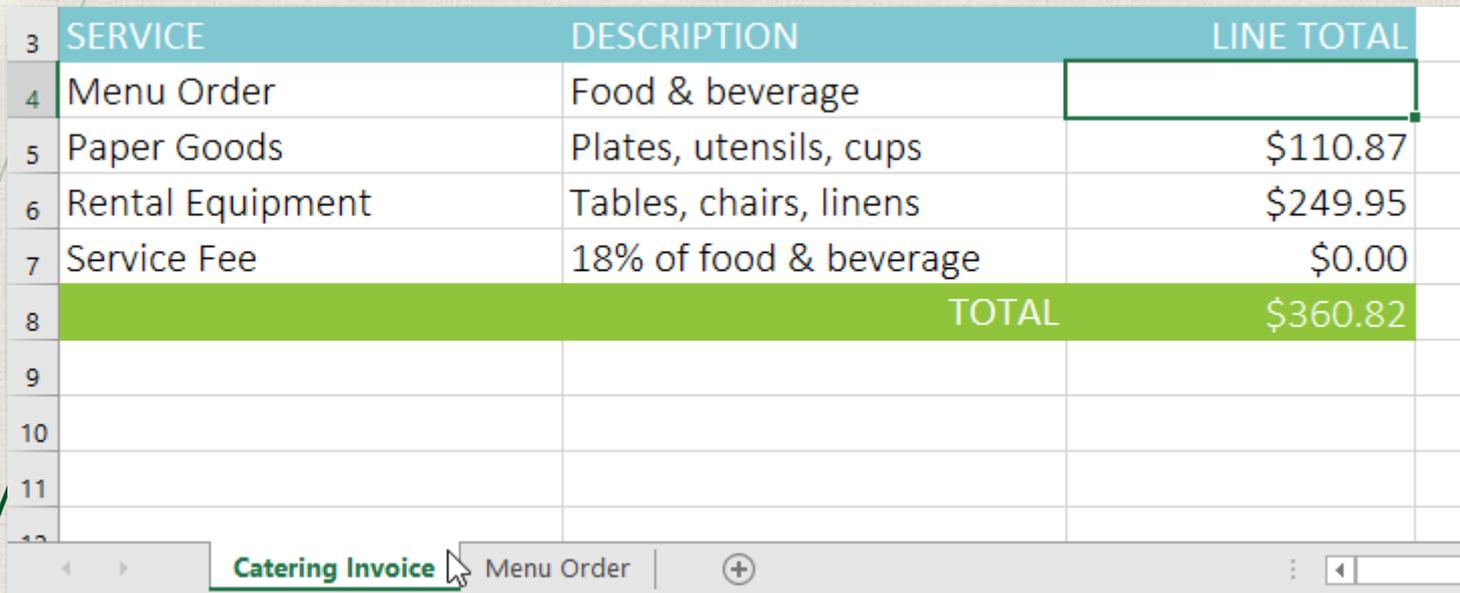
The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
2				TAX RATE:	7.5%
3	MENU ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	Empanadas: Beef Picadillo	\$2.99	15	\$3.36	\$48.21
5	Empanadas: Chipotle Shrimp	\$3.99	10	\$2.99	\$42.89
6	Tamales: Chicken Tinga	\$2.29	20	\$3.44	\$49.24
7	Tamales: Vegetable	\$2.29	30	\$5.15	\$73.85
8	Arepas: Carnitas	\$2.89	10	\$2.17	\$31.07
9	Arepas: Queso Blanco	\$2.49	20	\$3.74	\$53.54
10	Empanadas: Apple Cinnamon	\$3.19	40	\$9.57	\$137.17
11	Beverages: Horchata	\$1.89	25	\$3.54	\$50.79
12	Beverages: Lemonade	\$1.89	35	\$4.96	\$71.11
13	Beverages: Tamarindo	\$1.89	10	\$1.42	\$20.32
14				TOTAL	+\$578.19
15					
16					
17					
18					

The formula bar shows the formula `=SUM(E4:E13)` and the cell E14 is highlighted in green. The worksheet tab at the bottom is labeled "Menu Order".

To reference cells across worksheets

2. Navigate to the desired **worksheet**. In our example, we'll select the **Catering Invoice** worksheet.



3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	
5	Paper Goods	Plates, utensils, cups	\$110.87
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$0.00
8	TOTAL		\$360.82
9			
10			
11			
12			

The screenshot shows the Excel interface with the 'Catering Invoice' worksheet selected in the bottom tab bar. The spreadsheet data is as follows:

3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	
5	Paper Goods	Plates, utensils, cups	\$110.87
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$0.00
8	TOTAL		\$360.82
9			
10			
11			
12			

To reference cells across worksheets

3. Locate and select the **cell** where you want the value to appear. In our example, we'll select cell **C4**.

	A	B	C
3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	+
5	Paper Goods	Plates, utensils, cups	\$110.87
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$0.00
8		TOTAL	\$360.82
9			

To reference cells across worksheets

4. Type the **equals sign (=)**, the **sheet name** followed by an **exclamation point (!)**, and the **cell address**. In our example, we'll type **=Menu Order!E14**.

	A	B	C
3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	=Menu Order!E14
5	Paper Goods	Plates, utensils, cups	\$110.87
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$104.07
8		TOTAL	\$1,043.08
9			

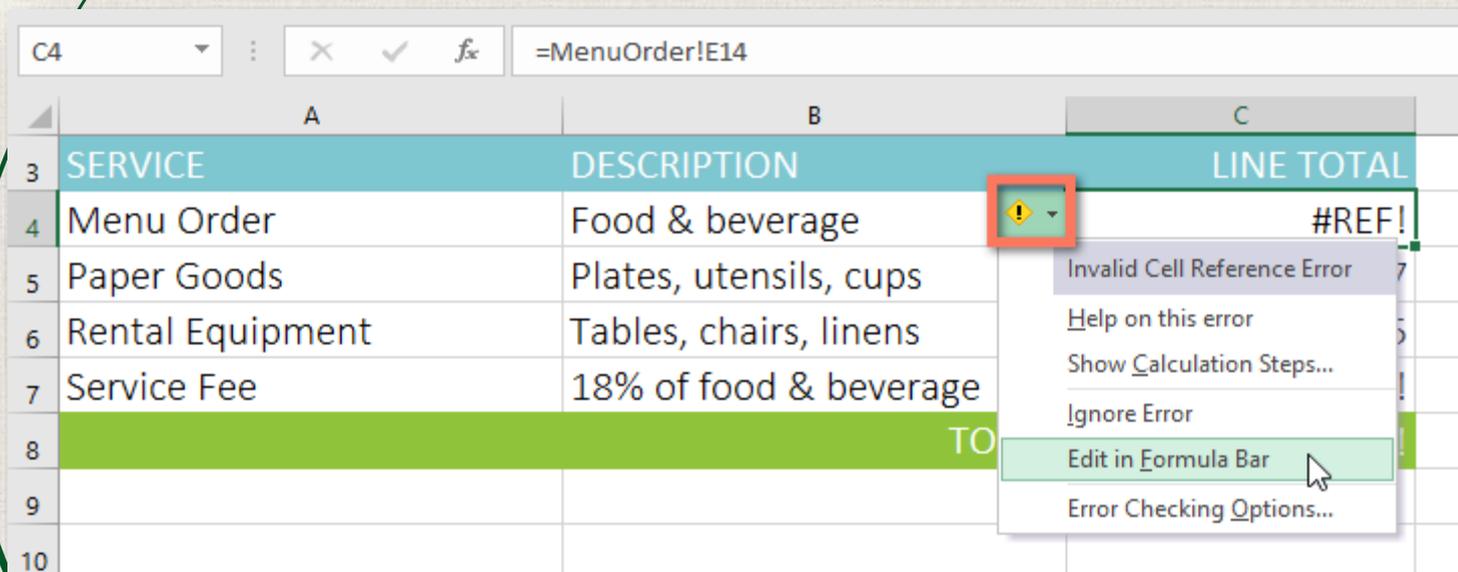
To reference cells across worksheets

5. Press **Enter** on your keyboard. The **value** of the referenced cell will appear. Now, if the value of cell E14 changes on the Menu Order worksheet, it will be updated automatically on the Catering Invoice worksheet.

	A	B	C
3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	\$578.19
5	Paper Goods	Plates, utensils, cups	\$110.87
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$104.07
8		TOTAL	\$1,043.08
9			

To reference cells across worksheets

- If you **rename** your worksheet at a later point, the cell reference will be updated automatically to reflect the new worksheet name.
- If you enter a worksheet name incorrectly, the **#REF!** error will appear in the cell. In our example below, we've mistyped the name of the worksheet. To edit, ignore, or investigate the error, click the **Error** button beside the cell and choose an option from the **menu**.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C
3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	#REF!
5	Paper Goods	Plates, utensils, cups	
6	Rental Equipment	Tables, chairs, linens	
7	Service Fee	18% of food & beverage	
8		TO	
9			
10			

The formula bar shows the formula in cell C4: `=MenuOrder!E14`. The error message dropdown menu is open, showing the following options:

- Invalid Cell Reference Error
- Help on this error
- Show Calculation Steps...
- Ignore Error
- Edit in Formula Bar (highlighted)
- Error Checking Options...

Practice – Part 1

- Open our **practice workbook**.
- Click the **Paper Goods** tab in the bottom-left of the workbook.
- In cell **D4**, enter a formula that multiplies the unit price in **B4**, the quantity in **C4**, and the tax rate in **E2**. Make sure to use an **absolute cell reference** for the tax rate because it will be the same in every cell.
- Use the **fill handle** to copy the formula you just created to cells **D5:D12**.
- Change the tax rate in cell **E2** to 6.5%. Notice that all of your cells have updated.

Solution

D4 $=B4*C4*E\$2$

	A	B	C	D	E
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804		Invoice #: 5686B Date: 05/10/16
2				TAX RATE:	6.5%
3	ITEM	UNIT PRICE	QUANTITY	SALES TAX	LINE TOTAL
4	10.5" Extra Thick Dinner Plates - 20 count	\$3.79	15	\$3.70	\$60.55
5	8" Deep Dessert Plates - 15 count	\$3.99	20	\$5.19	\$84.99
6	16 oz. Beverage Cups - 30 count	\$1.29	10	\$0.84	\$13.74
7	12 oz. Styrofoam Coffee Cups - 20 count	\$1.59	15	\$1.55	\$25.40
8	50 count Plastic Spoons - White	\$2.59	6	\$1.01	\$16.55
9	50 count Plastic Forks - White	\$2.69	6	\$1.05	\$17.19
10	50 count Plastic Knives - White	\$2.19	6	\$0.85	\$13.99
11	100 count Dinner Napkins - Blue	\$1.39	3	\$0.27	\$4.44
12	75 count Beverage Napkins - Green	\$1.19	4	\$0.31	\$5.07
13				TOTAL	\$241.91

Practice – Part 2

- Click the **Catering Invoice** tab.
- Delete the value in cell **C5** and replace it with a **reference** to the total cost of the paper goods. **Hint:** The cost of the paper goods is in cell **E13** on the **Paper Goods** worksheet.
- **Optional:** Use the same steps from above to calculate the sales tax for each item on the **Menu Order** worksheet. The total cost in cell **E14** should update. Then, in cell **C4** of the **Catering Invoice** worksheet, create a **cell reference** to the total you just calculated. **Note:** If you used our practice workbook to follow along during the lesson, you may have already completed this step.

Solution

C5 fx ='Paper Goods'!E13

	A	B	C
1		Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	Invoice #: 5686B Date: 05/10/16
2			
3	SERVICE	DESCRIPTION	LINE TOTAL
4	Menu Order	Food & beverage	\$572.81
5	Paper Goods	Plates, utensils, cups	\$241.91
6	Rental Equipment	Tables, chairs, linens	\$249.95
7	Service Fee	18% of food & beverage	\$103.11
8		TOTAL	\$1,167.78



THE END

THE END