VLOOKUP AT THE CAMPUS CAFE

A Guide to Learning the VLOOKUP Function Using a Coffee Shop Menu

Excel Campus

IN THIS GUIDE:

1. HOW TO USE THIS GUIDE

Welcome to the Excel Campus Cafe!

In this guide you will learn the basic concepts of the VLOOKUP function. I provide a step-by-step manual on how to write a vlookup formula and you can download an Excel file to follow along.

Plus, you will never look at a restaurant menu the same way again... ☺

Purpose: Learn how the VLOOKUP function works with this simple explanation and example using the "Excel Campus Cafe" menu.

Download the free file and follow along: VLOOKUP Explained in Simple Terms at Starbucks.zipDownload

Additional resources to refer to after:

We run a regular free training session on the Excel Power Tools, including VLOOKUP and XLOOKUP. You can register for the training sessions here. Attending this training will help build on the knowledge you learn through this guide.

We also have a series of posts related to this guide on our blog, including the following:

- VLOOKUP & MATCH – A Dynamic Duo
- The INDEX Function – A Road Map for Your Spreadsheet
- How to Calculate Commissions in Excel with VLOOKUP
- How to Use VLOOKUP to Find the Closest Match – Last Argument is TRUE

2. VLOOKUP AT A COFFEE SHOP?

I was standing in line at Starbucks the other day, studying the prices on the menu, and I realized I was doing a bunch of vlookups in my head.

As I scanned down the items on the menu and then looked across to the price columns, I was doing the same thing a vlookup function does.

So I thought this might be a good way to explain the vlookup because everyone can relate to ordering from a food menu. And even if you're already a vlookup expert, this might help you explain the function to your co-workers.

VLOOKUP DEFINED

The job of the vlookup is to look for a value (either numbers or text) in a column. Once it finds a match, the vlookup will return a value from any cell in the same row as the match.

3. THE EXCEL CAMPUS CAFE MENU EXAMPLE

Let's look at the "Campus Cafe" menu as an example. When looking at the menu I decide that I want to order a Caffe Mocha. I also know that I want a size Grande. Now I need to determine the price to make sure I have enough money to pay for this expensive cup of coffee. ☺

We naturally do this process in a series of steps in our head (see image above):

1. First we look down the list of items on the left side of the menu until we find Caffe Mocha.

2. Once we find the item, we then look across the columns to the right to find the price.

3. The prices for the size Grande items are listed in the 3rd column of the menu, so we scan over to the 3rd column to find our price. There it is, $3.95 for a delicious cup of energy.

4. VLOOKUP FUNCTION COMPONENTS

	A	B	C	D	E
1	**CLASSIC FAVORITES**	**TALL**	**GRANDE**	**VENTI**	
2	Caffe Latte	$2.95	$3.75	$4.15	
3	Cappuccino	$2.95	$3.65	$4.15	
4	Caramel Macchiato	$3.75	$3.95	$4.25	
5	Caffe Mocha	$3.25	$3.95	$4.40	
6	White Chocolate Mocha	$3.45	$4.15	$4.55	
7	Caffe Americano	$2.00	$2.40	$2.75	
8	Cinnamon Dolce Latte	$3.95	$4.75	$5.15	
9	Steamer	$2.25	$2.50	$2.75	
10	Drip Coffee	$1.75	$1.95	$2.05	
11					
12	**Question: What is the price of a Caffe Mocha, size Grande?**				
13					
14	Caffe Mocha				
15					

We want to answer the question: **"What is the price of a Caffe Mocha, size Grande?"**

We will use the vlookup function to answer this question in cell B14.

First we need to understand the components or arguments that make up the vlookup function. The following image shows the Excel definition of the Vlookup function, and then my simple definition. This simple definition just makes it easier for me to remember the four arguments.

Excel Definition

=VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

Simple Definition

=VLOOKUP(what, where, column num, closest match)

I explain this simple definition below as we walk through an example of creating a vlookup formula.

5. CREATING THE VLOOKUP FORMULA

Now we will create the vlookup formula to find the price of the Grande Caffe Mocha.

1. lookup_value – This is the **what** argument.

In the first argument we tell the vlookup what we are looking for. In this example we are looking for "Caffe Mocha". I have entered the text "Caffe Mocha" in cell A14, so we can make a reference to cell A14 in the formula.

We could also add the text "Caffe Mocha" (surrounded in quotes) directly into the formula.

=VLOOKUP("Caffe Mocha")

But using cell references (A14) makes the formula easier to copy down and reuse for lookups on other items.

2. table_array – This is the **where** argument.

	A	B	C	D	E	F	G
1	CLASSIC FAVORITES	TALL	GRANDE	VENTI			
2	Caffe Latte	$2.95	$3.75	$4.15			
3	Cappuccino	$2.95	$3.65	$4.15			
4	Caramel Macchiato	$3.75	$3.95	$4.25			
5	Caffe Mocha	$3.25	$3.95	$4.40			
6	White Chocolate Mocha	$3.45	$4.15	$4.55			
7	Caffe Americano	$2.00	$2.40	$2.75			
8	Cinnamon Dolce Latte	$3.95	$4.75	$5.15			
9	Steamer	$2.25	$2.50	$2.75			
10	Drip Coffee	$1.75	$1.95	$2.05			
11							
12	Question: What is the price of a Caffe Mocha, size Grande?						
14	Caffe Mocha	=VLOOKUP(A14,$A$2:$D$10					
15		VLOOKUP(lookup_value, **table_array**, col_index_num, [range_lookup])					
16							

Where:
Vlookup searches the first column in the **table_array** for the **lookup_value**.

We need to tell the vlookup where to look for "Caffe Mocha". This argument is specified as a range of cells, and the vlookup will only look in the **left column** of this range. We also need to include the columns that we want to return a value from. In this case we need to include the price columns because we want to return the price for our lookup_value.

So I reference the range $A$2:$D$10 in the second argument of the function. This means that the vlookup will look through all the rows in column A, from A2 to A10, in search of the value "Caffe Mocha". Once a match is found it will then look to the right a specific number of columns to return a result.

3. col_index_num – This is the **column number** argument.

The **column number** tells the vlookup which column in the table_array we want to return as the result. It counts the columns from left-to-right based on the starting column of the table_array.

Since we want to know the price for the size Grande, I put the number "3" as the third argument of the function. This will return a result from the third column (column C) of the table_array.

4. [range_lookup] – This is the **closest match** argument.

Here we specify whether the vlookup should find an exact match or closest match to the lookup_value. By default, the vlookup will find the closest match to our lookup_value and return a result. This method is best used for looking up numbers.

However, for our example we want to find the exact match to the word "Caffe Mocha", so I will put "False" for the range_lookup argument. This means that the vlookup will look for an exact match to the value "Caffe Mocha" in the first column of the table_array. If it does not find the word it will return an error (#N/A).

The Result – $3.95 for a Grande Caffe Mocha!

	A	B	C	D	E	F	G
1	CLASSIC FAVORITES	TALL	GRANDE	VENTI			
2	Caffe Latte	$2.95	$3.75	$4.15			
3	Cappuccino	$2.95	$3.65	$4.15			
4	Caramel Macchiato	$3.75	$3.95	$4.25			
5	Caffe Mocha	$3.25	$3.95	$4.40			
6	White Chocolate Mocha	$3.45	$4.??	$4.55			
7	Caffe Americano	$2.00	$2.4?	$2.75			
8	Cinnamon Dolce Latte	$3.95	$4.?5	$5.15			
9	Steamer	$2.25	$2.?0	$2.75			
10	Drip Coffee	$1.75	$?.95	$2.05			
11							
12	Question: What is the price of a Caffe Mocha, size Grande?						
13							
14	Caffe Mocha	3.95					
15							

VLOOKUP Summary:
1. The vlookup looks down column A to find "Caffe Mocha".

2. Then it looks 3 columns to the right.

3. And returns the result in cell B14.

The vlookup formula returns the value 3.95 in cell B14 as expected. This formula can now be reused in other cells to look up other items in the menu. Or you could change the value in cell A14 to a different menu item, "Cappuccino" for example, to instantly see the price for the size Grande Cappuccino.

6. CONCLUSION – IT'S TIME FOR A COFFEE!

hope this helps you understand the basics of how the vlookup function works. Vlookup is one of the most commonly used functions in Excel for looking up data, and it's a great one to know. This article only scratches the surface of what can be done with the vlookup function, but it's best to understand the basics before you learn more advanced techniques.

Most importantly, you now have a good excuse to go out for a coffee break next time you need to explain the vlookup function to a co-worker. ☺