

M365 Excel Basics Video 09: The VLOOKUP and XLOOKUP Functions

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Topics covered in the M365 Excel Basics Video 9:

XLOOKUP Function

- ❖ Comparing VLOOKUP and XLOOKUP Function
- ❖ Using XLOOKUP Function with Exact Match or next Smaller Item
- ❖ Using XLOOKUP Function with an Exact Match
- ❖ Converting Data to Excel Table and using XLOOKUP for the helper column
- ❖ Analyzing our reports with Standard PivotTable Reports

| Date | Region | SalesRep Alpha Code | Product Code | Sales | Product | SalesRep | Product Code | Product | SalesRep Alpha Code | SalesRep |
|------------|-----------|---------------------|--------------|----------|-----------------------|------------|-----------------------|-------------------------|---------------------|-------------------------|
| 10/30/2022 | West | MA3321 | RHD213 | \$257.96 | Rainbow High Dolls | Macen | RHD213 | Rainbow High Dolls | CA5564 | Carmen |
| 4/2/2022 | North | CA5564 | RHD213 | \$219.50 | Rainbow High Dolls | Carmen | SAB455 | Stuffed Animals/Bears | CI4452 | Cinderelli |
| 3/11/2023 | West | MI2245 | RHD213 | \$130.12 | Rainbow High Dolls | Miles | OMLS55 | LOL OMG Surprise | MA3321 | Macen |
| 1/5/2023 | North | TI7723 | SAB455 | \$176.26 | Stuffed Animals/Bears | Tiana | MNT412 | Monster Trucks | MI2245 | Miles |
| 7/13/2022 | South | CA5564 | OMLS55 | \$128.57 | LOL OMG Surprise | Carmen | HWS775 | Hot Wheels | TI7723 | Tiana |
| 6/28/2023 | North | TI7723 | MNT412 | \$468.02 | Monster Trucks | Tiana | LOS523 | LOL Surprise | | |
| 4/10/2023 | Central | TI7723 | MNT412 | \$449.20 | Monster Trucks | Tiana | | | | |
| 5/27/2022 | West | TI7723 | OMLS55 | \$325.73 | LOL OMG Surprise | Tiana | | | | |
| 5/26/2022 | North | MA3321 | SAB455 | \$306.42 | Stuffed Animals/Bears | Macen | Product | Total Sales (\$) | SalesRep | Total Sales (\$) |
| 7/3/2023 | NorthWest | MA3321 | HWS775 | \$211.67 | Hot Wheels | Macen | Hot Wheels | 3,664,677 | Carmen | 4,456,696 |
| 11/16/2022 | South | MA3321 | HWS775 | \$499.53 | Hot Wheels | Macen | LOL OMG Surprise | 3,703,177 | Cinderelli | 4,377,290 |
| 8/11/2023 | NorthWest | MI2245 | HWS775 | \$354.88 | Hot Wheels | Miles | LOL Surprise | 3,695,461 | Macen | 4,373,775 |
| 8/27/2023 | Central | CI4452 | LOS523 | \$313.60 | LOL Surprise | Cinderelli | Monster Trucks | 3,602,462 | Miles | 4,373,286 |
| 6/15/2023 | North | CA5564 | LOS523 | \$373.04 | LOL Surprise | Carmen | Rainbow High Dolls | 3,650,981 | Tiana | 4,395,642 |
| 9/6/2022 | NorthWest | MI2245 | RHD213 | \$403.66 | Rainbow High Dolls | Miles | Stuffed Animals/Bears | 3,659,932 | Grand Total | 21,976,689 |
| 7/3/2023 | Central | MA3321 | SAB455 | \$309.44 | Stuffed Animals/Bears | Macen | Grand Total | 21,976,689 | | |
| 7/4/2023 | West | CA5564 | SAB455 | \$310.82 | Stuffed Animals/Bears | Carmen | | | | |

VLOOKUP and XLOOKUP Functions

XLOOKUP is one of the new functions in Microsoft Office 365 in Excel, and it addresses many of the problems with the older lookup function VLOOKUP function. The XLOOKUP function is a new function that replaces VLOOKUP and some other lookup functions.

VLOOKUP is one of the most widely used functions in Excel history. VLOOKUP Function retrieves (goes and gets) something from a table and brings it back to the cell or formula.

We will only work on one VLOOKUP example in this video just in case you get stuck if you inherit a file that used VLOOKUP.

And as I said, Our main focus in this video is XLOOKUP as this is the newer formula in Microsoft 365 Excel and another important reason is because employers want to make sure that interviewees can do XLOOKUP.

In VLOOKUP, the V means Vertical.

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

lookup_value = Item that you are trying to find in first column of lookup table. You must look at it BEFORE you go over to the table.

table_array = vertical table = VLOOKUP table

col_index_num = which column in the table has the thing you want to go and get and bring back to the cell.

[range_lookup] = Exact Match = FALSE or 0. Approximate Match = TRUE or 1 or omitted.

Approximate Match: ***[range_lookup] is 4th argument in VLOOKUP.*

For Approximate Match, the VLOOKUP table MUST be sorted on the first column: Ascending, A to Z, Small to Big.

For Approximate Match VLOOKUP will race through the first column:

1. If the first value in the table is smaller than the lookup_value, VLOOKUP returns a Not Available Error: #N/A!
2. It looks through the first column until it bumps into the first value bigger than it and then jump back one row (it does a binary search which is really fast compared to Exact Match)
3. If the lookup_value is bigger than the last value, it stops at the last row.

Exact Match: ***[range_lookup] is 4th argument in VLOOKUP.*

VLOOKUP will look through each item in the first column of the VLOOKUP table and try to find a match. If VLOOKUP cannot find a match it will be polite and say that it is not available: #N/A!

If you are doing Exact Match use Data Validation List:

Data Ribbon Tab, Data Tools, Data Validation, Allow textbox = List, Source = first column of VLOOKUP table_array.

One of the problems with VLOOKUP formulas is that if you insert a new column to the lookup table, the VLOOKUP will return the wrong answer because you have inserted a new column for example if column 2 had the bonus commission and you insert a new column with the category, VLOOKUP will return the category as column 2 since it does not update the column numbers automatically on the VLOOKUP formula.

XLOOKUP solves the problem of having to specify a column number of the items you want to return by using separate ranges for the items to match. The second argument in XLOOKUP is the *lookup_array*

and the value to return is the third argument, *return_array*. With these two separate ranges in XLOOKUP, it does not matter if you add new columns to the lookup table, the formula will always work.

There are other lookup situations that VLOOKUP cannot perform but XLOOKUP can. For example, XLOOKUP can lookup cell references, sort a lookup table in descending order, and lookup the last item when there are duplicates. XLOOKUP is more efficient than many lookup formulas.

A lookup involves these basic steps:

1. Determine the Lookup Value
2. Try to match the lookup value in a lookup range (the list of items used to find a match).
3. Note the relative position of the match.
4. Go to the corresponding relative position in the return range (the potential items to retrieve).
5. Get the item from the relative position in the return range and bring it back to a particular cell or larger formula.

The XLOOKUP Function

The XLOOKUP Function in the Microsoft 365 Excel makes many different types of lookups much easier than the other earlier versions of Excel. The syntax for the XLOOKUP function is:

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

=XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

The arguments for the XLOOKUP function:

| Argument | Description |
|----------------------------|--|
| lookup_value Required* | The value to search for *If omitted, XLOOKUP returns blank cells it finds in lookup_array. |
| lookup_array Required | The array or range to search |
| return_array Required | The array or range to return |
| [if_not_found] Optional | Where a valid match is not found, return the [if_not_found] text you supply. If a valid match is not found, and [if_not_found] is missing, #N/A is returned. |
| [match_mode] Optional | Specify the match type: 0 - Exact match. If none found, return #N/A. This is the default. -1 - Exact match. If none found, return the next smaller item. 1 - Exact match. If none found, return the next larger item. 2 - A wildcard match where *, ?, and ~ have special meaning. |
| [search_mode] Optional | Specify the search mode to use: 1 - Perform a search starting at the first item. This is the default. -1 - Perform a reverse search starting at the last item. 2 - Perform a binary search that relies on lookup_array being sorted in ascending order. If not sorted, invalid results will be returned. -2 - Perform a binary search that relies on lookup_array being sorted in descending order. If not sorted, invalid results will be returned. |

Example 1: Create and Approximate Match and Exact Match using VLOOKUP function

Using Approximate Match VLOOKUP function to lookup the Commission Amount and the Sales Category. Use the Data Validation Dropdown feature to select the Employee's ID and the Exact Match VLOOKUP function to get the Employee Name and Commission Amount.

In Cell A35 use Data Validation drop-down List feature to add a drop-down list that allows you to select the employee's ID from the range A38:A48.

Formula used in Cell B35: =VLOOKUP(A35,A38:E49,2,0)

Formula used in Cell C35: =VLOOKUP(A35,A38:E49,4,0)

Formula used in Cell D38: =VLOOKUP(C38,\$I\$37:\$J\$42,2)

Formula used in Cell E38: =VLOOKUP(C38,\$I\$45:\$J\$49,2)

| | | | | | | |
|----|---|---------------------------|---------------------------|---------------------------------|---------------------------------|--|
| 25 | Example 1: Approximate Match VLOOKUP to get the Commission Amount and the Sales Category and Exact Match VLOOKUP to get the Employee Name and Commission Amount | | | | | |
| 26 | Goal: Create an Approximate Match and an Exact Match | | | | | |
| 27 | In Cell D38 create a formula to lookup the employees sales and return the correct Bonus Commission from the Commission Amount Lookup Table. Then copy the formula down the column | | | | | |
| 28 | The Company wants to determine the sales category for each of the sales made. | | | | | |
| 29 | In Cell E38 create a formula to determine the sales Category and copy the formula down. | | | | | |
| 30 | In Cell A35 use Data Validation drop-down List feature to add a drop-down list that allows you to select the employee's ID from the range A38:A48. | | | | | |
| 31 | Use VLOOKUP formula to lookup the Employee name and commission amount in the cell B35 and C35 respectively | | | | | |
| 32 | | | | | | |
| 33 | | =VLOOKUP(A35,A38:E49,2,0) | =VLOOKUP(A35,A38:E49,4,0) | | | |
| 34 | Employee ID | Employee Name | Commission Amount | | | |
| 35 | 4189 | William Puckett | \$500.00 | | | |
| 36 | | | | | | |
| 37 | Employee ID | Employee Name | Sales | Commission Amount | Sales Category | |
| 38 | 6196 | Dalia Monk | \$2,999.00 | \$100.00 | Good | |
| 39 | 6850 | Xavier Lozano | \$12,654.00 | \$500.00 | Target | |
| 40 | 7033 | Raina Hollis | \$16,588.00 | \$700.00 | Above Target | |
| 41 | 5337 | Lajuana Meier | \$26,545.00 | \$1,000.00 | Excellent | |
| 42 | 4189 | William Puckett | \$14,715.00 | \$500.00 | Target | |
| 43 | 5179 | Adaline Glass | \$50,549.00 | \$1,000.00 | Excellent | |
| 44 | 6563 | Gaylord Forbes | \$15,364.00 | \$700.00 | Above Target | |
| 45 | 6196 | Miles Tuggle | \$35,544.00 | \$1,000.00 | Excellent | |
| 46 | 6271 | Candra Montalvo | \$15,965.00 | \$700.00 | Above Target | |
| 47 | 4490 | Eleanor Cunningham | \$34,247.00 | \$1,000.00 | Excellent | |
| 48 | 6992 | Elena Newton | \$7,577.00 | \$200.00 | Good | |
| 49 | 6434 | Renee Reid | \$24,817.00 | \$1,000.00 | Excellent | |
| 50 | | | | =VLOOKUP(C38,\$I\$37:\$J\$42,2) | | |
| 51 | | | | | =VLOOKUP(C38,\$I\$45:\$J\$49,2) | |
| 52 | | | | | | |

| Commission Amount Lookup Table | |
|--------------------------------|------------------|
| Sales | Bonus Commission |
| \$0.00 | \$0.00 |
| \$2,000.00 | \$100.00 |
| \$5,000.00 | \$200.00 |
| \$10,000.00 | \$500.00 |
| \$15,000.00 | \$700.00 |
| \$20,000.00 | \$1,000.00 |

| Sales | Category |
|-------------|--------------|
| \$0.00 | Poor |
| \$2,000.00 | Good |
| \$10,000.00 | Target |
| \$15,000.00 | Above Target |
| \$20,000.00 | Excellent |

Example 2: Create and Approximate Match and Exact Match using XLOOKUP Function

Using Approximate Match XLOOKUP function to get the Exact Match or the next smaller item to lookup the Commission Amount and the Sales Category. Use the Data Validation Dropdown feature to select the Employee's ID and the Exact Match XLOOKUP function to get the Employee Name and Commission Amount.

In Cell A46 use Data Validation drop-down List feature to add a drop-down list that allows you to select the employee's ID from the range A49:A60.

Formula used in Cell B46: =XLOOKUP(A46,A50:A61,B50:B61)

Formula used in Cell C46: =XLOOKUP(A46,A50:A61,D50#)

Formula used in Cell D50: =XLOOKUP(C50:C61,I48:I53,J48:J53,,-1)

Formula used in Cell E50: =XLOOKUP(C50:C61,I56:I60,J56:J60,,-1)

| Employee ID | Employee Name | Commission Amount | | | | | | | |
|-------------|-------------------------------|----------------------------|---------------------------------------|---------------------------------------|--|--|--|--|--|
| 5337 | Lajuana Meier | \$1,000.00 | | | | | | | |
| | =XLOOKUP(A46,A50:A61,B50:B61) | =XLOOKUP(A46,A50:A61,D50#) | | | | | | | |
| Employee ID | Employee Name | Sales | Commission Amount | Sales Category | | | | | |
| 6196 | Dalia Monk | \$2,999.00 | \$100.00 | Good | | | | | |
| 6850 | Xavier Lozano | \$12,654.00 | \$500.00 | Target | | | | | |
| 7033 | Raina Hollis | \$16,588.00 | \$700.00 | Above Target | | | | | |
| 5337 | Lajuana Meier | \$26,545.00 | \$1,000.00 | Excellent | | | | | |
| 4189 | William Puckett | \$14,715.00 | \$500.00 | Target | | | | | |
| 5179 | Adaline Glass | \$50,549.00 | \$1,000.00 | Excellent | | | | | |
| 6563 | Gaylord Forbes | \$15,364.00 | \$700.00 | Above Target | | | | | |
| 6196 | Miles Tuggle | \$35,544.00 | \$1,000.00 | Excellent | | | | | |
| 6271 | Candra Montalvo | \$15,965.00 | \$700.00 | Above Target | | | | | |
| 4490 | Eleanor Cunningham | \$34,247.00 | \$1,000.00 | Excellent | | | | | |
| 6992 | Elena Newton | \$7,577.00 | \$200.00 | Good | | | | | |
| 6434 | Renee Reid | \$24,817.00 | \$1,000.00 | Excellent | | | | | |
| | | | =XLOOKUP(C50:C61,I48:I53,J48:J53,,-1) | | | | | | |
| | | | | =XLOOKUP(C50:C61,I56:I60,J56:J60,,-1) | | | | | |

| Commission Amount Lookup Table | |
|--------------------------------|------------------|
| Sales | Bonus Commission |
| \$0.00 | \$0.00 |
| \$2,000.00 | \$100.00 |
| \$5,000.00 | \$200.00 |
| \$10,000.00 | \$500.00 |
| \$15,000.00 | \$700.00 |
| \$20,000.00 | \$1,000.00 |
| Sales | Category |
| \$0.00 | Poor |
| \$2,000.00 | Good |
| \$10,000.00 | Target |
| \$15,000.00 | Above Target |
| \$20,000.00 | Excellent |

Example 3: Add Data Validation and Create Exact Match using XLOOKUP Function

Using the XLOOKUP Function to Look Up the Graduation records based on an Exact Match Lookup and Data Validation List

When you do an exact match and the lookup table is easily accessible, you should use the Data Validation feature to add a dropdown list of the potential lookup values from the lookup array range to the call with the lookup value input. Doing this allows only items that are from the lookup array list to be entered into the lookup value input cell. This prevents the XLOOKUP function from failing to find the matches that exist and therefore prevents errors. In our example 3 we have done a data validation for the student name as this is our lookup value input cell.

Refer to M365 Excel Basics Video #05, on how to add the Data Validation.

Formulas use in the following Cell Refences for Example 3 calculations:

Student Name: Did a Data validation for Cell A7 for students names.

Graduation Quarter in Cell B7: `=XLOOKUP(A7,A11:A34,C11:C34)`

Degree Conferred in Cell C7: `=XLOOKUP(A7,A11:A34,E11:E34)`

Program of study in Cell D7: `=XLOOKUP(A7,A11:A34,B11:B34)`

Application Fee Paid in Cell E7: `=XLOOKUP(A7,A11:A34,D11:D34)`

| | A | B | C | D | E | F | G |
|----|---|---|--------------------|----------------------|----------------------|---------------|--------------|
| 1 | Example 3: GOAL: Lookup the students Program of study and Graduation Quarter, Check if Degree is Confered and if the Application Fee is paid. | | | | | | |
| 2 | In Cell A7 use Data Validation drop-down List feature to add a drop-down list that allows you to select the student's name from the range A11:A34 | | | | | | |
| 3 | Create a formula in the cells B7:E7 that you can use to look up what quarter the student graduated, if the student's degree was confered or not, what is their program of study | | | | | | |
| 4 | and if the student paid the application Fee | | | | | | |
| 5 | Use the Exact Match XLOOKUP formula | | | | | | |
| 6 | Student Name | Graduation Quarter | Degree Confered | Program of study | Application Fee Paid | | |
| 7 | George, Don | Spring, 2024 | Yes | AA Business | Yes | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | Student Name | Program of Study | Graduation Quarter | Application Fee Paid | Degree Confered | E-mail | Phone |
| 11 | June, Aler | BAS Business Management | Summer, 2024 | Yes | No | GMN@gmail.com | 206-439 8060 |
| 12 | Acer0, Natisha | AAS International Business and Trade | Summer,2024 | No | Yes | HHQ@gmail.com | 253-497 6926 |
| 13 | Bruess, Natisha | AAS Professional Sales and Marketting | Fall, 2024 | No | No | TQP@fun.edu | 206-822 1470 |
| 14 | Chukes, Hal | AAS International Business and Trade | Spring, 2023 | Yes | Yes | GTK@yahoo.com | 253-741 6896 |
| 15 | Dahnke, Georgeann | AAS Business | Fall, 2024 | No | No | GVI@yahoo.com | 206-471 2879 |
| 16 | Dillaman, Darius | AAS Professional Sales and Marketting | Fall, 2024 | No | No | WID@yahoo.com | 253-650 3628 |
| 17 | Durtschi, Dane | BAS Business Management | Fall, 2024 | No | No | XKM@fun.edu | 253-449 8722 |
| 18 | Fila, Bryon | AAS Business | Summer, 2024 | Yes | Yes | QXT@yahoo.com | 253-723 3694 |
| 19 | Fukumoto, Marvis | AAS Small Business and Entrepreneurship | Spring, 2024 | Yes | Yes | ZHI@gmail.com | 253-526 2648 |
| 20 | General, Marlin | AAS Accounting | Summer, 2024 | Yes | No | CDO@gmail.com | 253-517 5831 |
| 21 | Griffin, Gigi | AAS Small Business and Entrepreneurship | Spring, 2023 | Yes | Yes | JMJ@yahoo.com | 253-461 2381 |
| 22 | Sanders, Sioux | BAS Business Management | Summer,2024 | Yes | No | JEZ@fun.edu | 206-595 9201 |
| 23 | Tillard, Tyrone | AA Business | Summer, 2024 | Yes | Yes | ODQ@gmail.com | 253-758 5206 |
| 24 | Alberto, Al | BAS Business Management | Summer, 2024 | Yes | No | IFU@yahoo.com | 253-585 9588 |
| 25 | Long, Lori | AAS Small Business and Entrepreneurship | Fall, 2023 | Yes | Yes | PFP@gmail.com | 253-808 4979 |
| 26 | Sho, Sheliadawn | AAS Small Business and Entrepreneurship | Summer,2024 | Yes | Yes | NEN@gmail.com | 253-448 7711 |
| 27 | Krantz, Kiki | AAS Business | Winter 2023 | Yes | Yes | XZM@fun.edu | 253-316 2561 |
| 28 | Ellen, Erika | AAS Professional Sales and Marketting | Winter, 2024 | No | No | XWE@yahoo.com | 253-624 6492 |
| 29 | Chen, Chin | BAS Business Management | Winter, 2023 | Yes | No | MVV@fun.edu | 206-666 5735 |
| 30 | Prince, Popi | AA Business | Summer,2024 | Yes | Yes | HXQ@yahoo.com | 206-495 5771 |
| 31 | Barns, Peter | AAS Accounting | Summer, 2024 | No | Yes | HOO@gmail.com | 206-340 5335 |
| 32 | Vo, Lee | BAS Business Management | Summer, 2024 | Yes | No | BKW@gmail.com | 206-333 8808 |
| 33 | Thang, Scott | BAS Business Management | Spring, 2023 | Yes | Yes | TEA@gmail.com | 206-476 4419 |
| 34 | George, Don | AA Business | Spring, 2024 | Yes | Yes | DPT@gmail.com | 206-561 9433 |

Example 4: Use the Exact Match XLOOKUP Function to Look Up the Continent and use the Excel Table Feature

To convert Data to an Excel Table, select any one cell in the dataset and press CTRL +T to create an Excel Table. Be sure to check the box “My Table has headers” and to name the Excel Table.

In Cell E11 add another column to the City Population Table and name the column ‘Continent’. In Cell E12 Create an Exact Match using XLOOKUP Function to retrieve and return the Continent name for each from the continent Table. Lookup Value is the Country Field in the City Population Table, Lookup Array is the Country Field in the Continent Table, Return Array is the Continent Field in the Continent Table. Create a PivotTable that shows population by continent, Continent Field in the Rows Area, and Total Population in the Values Area. Name the PivotTable, show in Tabular Form and add number formatting.

Formula used in the Continent Column is: =XLOOKUP([@Country],Continentans[Country],Continentans[Continent])

| City | City/State | Country | Population | Continent |
|------------------|------------------|----------------------|------------|---------------|
| Washington | Washington | United States | 7,705,281 | North America |
| Dar es Salaam | Dar es Salaam | Tanzania | 4,715,000 | Africa |
| Nairobi | Nairobi | Kenya | 5,545,000 | Africa |
| Kampala | Kampala | Uganda | 1,680,600 | Africa |
| Abu Dhabi | Abu Dhabi | United Arab Emirates | 1,483,000 | Asia |
| Vienna | Vienna | Austria | 1,973,403 | Europe |
| Brussels | Brussels | Belgium | 1,218,255 | Europe |
| Paris | Paris | France | 2,145,906 | Europe |
| Berlin | Berlin | Germany | 3,755,251 | Europe |
| Rome | Rome | Italy | 2,872,800 | Europe |
| Dublin | Dublin | Ireland | 592,713 | Europe |
| New Delhi | New Delhi | India | 249,998 | Asia |
| Tokyo | Tokyo | Japan | 14,047,594 | Asia |
| Dhaka | Dhaka | Bangladesh | 16,800,000 | Asia |
| Beirut | Beirut | Lebanon | 2,421,354 | Asia |
| Colombo | Colombo | Sri Lanka | 752,993 | Asia |
| Hanoi | Hanoi | Vietnam | 8,330,800 | Asia |
| Canberra | Canberra | Australia | 452,670 | Australia |
| Flying Fish Cove | Flying Fish Cove | Christmas Island | 1,355 | Australia |
| Wellington | Wellington | New Zealand | 215,100 | Australia |

| Continent | Total Population |
|--------------------|--------------------|
| Africa | 58,629,853 |
| Asia | 66,641,302 |
| Australia | 15,714,301 |
| Europe | 12,558,328 |
| North America | 128,078,866 |
| South America | 4,857,600 |
| Grand Total | 286,480,250 |

| Country | Continent |
|----------------------------------|---------------|
| Angola | Africa |
| Australia | Australia |
| Austria | Europe |
| Bangladesh | Asia |
| Belgium | Europe |
| Brazil | South America |
| Burundi | Africa |
| Christmas Island | Australia |
| Comoros | Africa |
| Democratic Republic of the Congo | Africa |
| Egypt | Africa |
| Ethiopia | Africa |
| France | Europe |
| Germany | Europe |
| Ghana | Africa |
| Guinea-Bissau | Africa |
| India | Asia |
| Ireland | Europe |
| Italy | Europe |
| Japan | Asia |

Example 5: Exact Match XLOOKUP Function to Lookup the Product and SalesRep

Using the XLOOKUP Function to Look Up the Product and SalesRep based on an Exact Match Lookup, analyze the data with 3 PivotTable Reports and Visualize the SalesRep Total Sales with a Clustered Column Chart.

Create helper columns in the Fact Table for the SalesRep and the Product. Use the XLOOKUP function to lookup the SalesRep and the Product and put them in the fact Table. Use the XLOOKUP function to add the Product and SalesRep field to the fact table. Create 3 different PivotTables as seen in our video and Excel File for Video 9. Visualize the SalesRep Total Sales using a Clustered Column Chart

Formula used in Cell F9: =XLOOKUP(D9:D73185,I9:I14,J9:J14)

Formula used in Cell G9: =XLOOKUP(C9:C73185,L9:L13,M9:M13)

| Date | Region | SalesRep Alpha Code | Product Code | Sales | Product | SalesRep | Product Code | Product | SalesRep Alpha Code | SalesRep |
|------------|-----------|---------------------|--------------|----------|-----------------------|------------|--------------|-----------------------|---------------------|------------|
| 10/30/2022 | West | MA3321 | RHD213 | \$257.96 | Rainbow High Dolls | Macen | RHD213 | Rainbow High Dolls | CA5564 | Carmen |
| 4/2/2022 | North | CA5564 | RHD213 | \$219.50 | Rainbow High Dolls | Carmen | SAB455 | Stuffed Animals/Bears | CI4452 | Cinderelli |
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| 7/13/2022 | South | CA5564 | OMLS55 | \$128.57 | LOL OMG Surprise | Carmen | HWS775 | Hot Wheels | TI7723 | Tiana |
| 6/28/2023 | North | TI7723 | MNT412 | \$468.02 | Monster Trucks | Tiana | LOS523 | LOL Surprise | | |
| 4/10/2023 | Central | TI7723 | MNT412 | \$449.20 | Monster Trucks | Tiana | | | | |
| 5/27/2022 | West | TI7723 | OMLS55 | \$325.73 | LOL OMG Surprise | Tiana | | | | |
| 5/26/2022 | North | MA3321 | SAB455 | \$306.42 | Stuffed Animals/Bears | Macen | | | | |
| 7/3/2023 | NorthWest | MA3321 | HWS775 | \$211.67 | Hot Wheels | Macen | | | | |
| 11/16/2022 | South | MA3321 | HWS775 | \$499.53 | Hot Wheels | Macen | | | | |
| 8/11/2023 | NorthWest | MI2245 | HWS775 | \$354.88 | Hot Wheels | Miles | | | | |
| 8/27/2023 | Central | CI4452 | LOS523 | \$313.60 | LOL Surprise | Cinderelli | | | | |
| 6/15/2023 | North | CA5564 | LOS523 | \$373.04 | LOL Surprise | Carmen | | | | |
| 9/6/2022 | NorthWest | MI2245 | RHD213 | \$403.66 | Rainbow High Dolls | Miles | | | | |
| 7/3/2023 | Central | MA3321 | SAB455 | \$309.44 | Stuffed Animals/Bears | Macen | | | | |
| 7/4/2023 | West | CA5564 | SAB455 | \$310.82 | Stuffed Animals/Bears | Carmen | | | | |
| 8/16/2023 | West | CA5564 | HWS775 | \$399.11 | Hot Wheels | Carmen | | | | |
| 3/26/2022 | South | CA5564 | OMLS55 | \$267.87 | LOL OMG Surprise | Carmen | | | | |
| 5/25/2022 | Central | MA3321 | OMLS55 | \$426.51 | LOL OMG Surprise | Macen | | | | |
| 6/2/2022 | Central | CI4452 | MNT412 | \$273.42 | Monster Trucks | Cinderelli | | | | |
| 5/2/2023 | NorthWest | MI2245 | RHD213 | \$313.38 | Rainbow High Dolls | Miles | | | | |
| 8/29/2022 | NorthWest | CA5564 | RHD213 | \$191.70 | Rainbow High Dolls | Carmen | | | | |
| 1/3/2022 | West | TI7723 | LOS523 | \$494.93 | LOL Surprise | Tiana | | | | |
| 12/14/2021 | West | MI2245 | LOS523 | \$114.47 | LOL Surprise | Miles | | | | |
| 12/7/2022 | South | CI4452 | MNT412 | \$184.99 | Monster Trucks | Cinderelli | | | | |
| 1/23/2023 | NorthWest | MI2245 | LOS523 | \$118.66 | LOL Surprise | Miles | | | | |

| Product | Total Sales (\$) |
|-----------------------|-------------------|
| Hot Wheels | 3,664,677 |
| LOL OMG Surprise | 3,703,177 |
| LOL Surprise | 3,695,461 |
| Monster Trucks | 3,602,462 |
| Rainbow High Dolls | 3,650,981 |
| Stuffed Animals/Bears | 3,659,932 |
| Grand Total | 21,976,689 |

| Region | Total Sales (\$) |
|--------------------|-------------------|
| Central | 4,353,649 |
| North | 4,391,689 |
| NorthWest | 4,381,373 |
| South | 4,410,537 |
| West | 4,439,441 |
| Grand Total | 21,976,689 |