

## VLOOKUP Function

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 The first function we are going to review is called VLOOKUP. The VLOOKUP performs a *vertical* lookup by locating an item in the first column of a table and then searches in the corresponding columns to the right.

 Display the **VLOOKUP FUNCTION INTRO** spreadsheet.

 Review the function arguments, syntax and example.

### USING THE VLOOKUP FUNCTION

1. Display the **VLOOKUP** spreadsheet.

 I'm going to use the **VLOOKUP** function to insert the employee's **Division** name by looking up the employee number, **EMP218** in **CELL B3**.

 Click in cell B4 and type: **=VLOOKUP(B3, B10:K203, 7)** and press **{ENTER}**.

 Select the range **B3** in the formula bar.

 Press the function key **F4** on the keyboard to make cell references absolute.

 Select the range **B10:K203** in the formula bar.

 Press the function key **F4** on the keyboard to make cell references absolute.

**Tip:** Use **CTRL + '**  to duplicate information from the cell above into the current cell.

 Now I'm going to duplicate the **VLOOKUP** function to insert the **Gross Pay** amount.

 Click **CELL B5** and press **CTRL + '**  to duplicate the above formula.

 **Ask Class:** What column number do I need to specify to retrieve the **Gross Pay** information?

 Change the **COL\_INDEX\_NUM** to **10**.

 Press **ENTER** to complete the change.

2. Keep the workbook open for the next exercise.

## LOCATING MISSING RECORDS USING VLOOKUP



In this next exercise one sheet has a master list of all employees.



Display the **VLOOKUP MASTER LIST** worksheet.



The second sheet has the print out of the check run.



Display the **VLOOKUP FIND MISSING** worksheet.



We will use the VLOOKUP function to compare the records to see if any records are missing.

**Tip:** If you want to find an actual question mark or asterisk, type a tilde (~) preceding the character



Display the **VLOOKUP MASTER LIST** worksheet and click cell **L6**.



Type the follow formula and press **{ENTER}**:

**=VLOOKUP(B6, 'VLOOKUP Find Missing'!C4:L194,1,FALSE)**



I'm going to show you a shortcut to make the range used in the formula absolute. This will keep the cell references from changing when dragging using the **AutoFill** handle.



Select the range **C4:L194** in the formula bar.



Press the function key **F4** on the keyboard to make cell references absolute.



Click the **ENTER** button  or press **{ENTER}**



Use **AUTOFILL** to copy the formula down the entire column.



Notice the rows where **#N/A** displays for the result. The **#N/A** indicates a matching record could not be found. These are the missing records.



Save and keep the workbook open for the next exercise.

## HLOOKUP Function

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Now we'll look at the HLOOKUP function. The HLOOKUP performs a *horizontal* lookup by locating an item in the first row of a table and then searches in the corresponding rows below.



Display the **HLOOKUP FUNCTION INTRO** spreadsheet.



Review the function arguments, syntax and example.

## USING THE HLOOKUP FUNCTION

-  Display the **HLOOKUP** spreadsheet.
-  We're going to use the HLOOKUP function to look up the **Division** and **Gross Pay** information based on the Employee number 191.
-  Click in **CELL B4**.
-  Type the following formula and press **{ENTER}**:  
**=HLOOKUP(B3,EmployeeList,7,FALSE)**
-  Instead of manually typing the tab sheet name and cell range as I did for the VLOOKUP function, I am using a **defined name** for **cells C7:S16**.
-  Click in **CELL B5**.
-  Type the following formula and press **{ENTER}**:  
**=HLOOKUP(B3,EmployeeList,10,FALSE)**

## LEFT and FIND Functions

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-  Now we are going to look at how to use the **LEFT** and **FIND** functions.
-  There are times when it takes more than one function to find an answer you need. You can combine functions in one cell. This is called **nesting functions**.
-  First let's look at each function separately to see how they work and then we will combine them.

## LEFT FUNCTION OVERVIEW

-  Display the **LEFT FUNCTION INTRO** spreadsheet.
-  The **LEFT** function is used to locate and return a number of characters starting from the left side of the cell.
-  Review the function arguments, syntax and example.

## FIND FUNCTION OVERVIEW

-  Display the **FIND FUNCTION INTRO** spreadsheet.
-  The **FIND** function looks for a character that you specify and returns the number position of that character in the cell.
-  The **FIND** is case sensitive. Always be sure to type your character using the correct case.
-  Review the function arguments, syntax and example.

## USING LEFT AND FIND FUNCTIONS TOGETHER

-  Display the **LEFT\_FIND TOGETHER INTRO** spreadsheet.
-  Now that you know the **FIND** function can give you the location of a specific character, you can use that information to help you with the **LEFT** function.
-  Here is our example scenario: we would like to separate the first names from the text string in a cell.
-  Review the function arguments, syntax and example.
-  Now we are going to look at using the **LEFT** and **FIND** functions together to extract user names from email addresses.
-  Display the **LEFT\_FIND TOGETHER** spreadsheet.
-  Click in **CELL B2**.
-  Type the following formula and press **{ENTER}**:  
**=LEFT(A2,FIND("@",A2,1)-1)**
-  Use **AUTOFILL** to copy the formula down the column.
-  Save the workbook.