

Tips and Shortcuts

Drag Fill

1. Go to the 2016 Sales Report worksheet.
2. In cell E4 key in the calculation =D4-C4 and hit enter.
3. Go back to cell E4 and put your cursor in the bottom right corner of the cell. Your cursor should change to a black cross. With your cursor as a black cross, click and drag your cursor to E54. Notice that Excel carried your formulas to the other cells.
4. Press Control + Z on your keyboard to undo the copy you just did.
5. Go back to cell E4 and put your cursor in the bottom right corner of the cell. Your cursor should change to a black cross. With your cursor as a black cross, double click. Notice that Excel copied your formula all the way down without you dragging the cursor to the last cell.

Filters

1. Go to the 2021 North Region Participants worksheet.
2. Highlight row 3.
3. Go to Data tab and select the filter button in the sort and filter group.
4. Click the **Share Type** drop down button, uncheck the **select all** check box, and check **Vegetable**.
5. Click the **Share Cost** drop down button, go to the number filters section and select less than or equal to.
 - a. In the first section make sure that is less than or equal to is selected.
 - b. Type 220 in the empty box next to less than or equal to.
 - c. Click OK.
6. Click the **Pickup Day** filter button and click **Sort Z to A** in the menu.

Quick Status Toolbar

1. Highlight the cells that are visible in the **Share Cost** column.
2. Look in the status bar and notice that Excel does some quick calculations for you.
 - a. Average is \$161, Count is 10, and the Sum is \$1610.
3. Release the filters by going to the Data tab in the ribbon and click the **clear** button.

Multilevel Sort

1. Select the range A3:I80.
2. Go to the Data tab on the ribbon.
3. Select the Sort button
4. Make sure the button in the top right that says "My data has headers" is checked.
5. In the first section make these selections
 - a. Sort by: Pickup Location
 - b. Sort on: Values

- c. Order: A to Z
6. Click Add Level
7. In the second section make these selections
 - a. Sort by: Pickup Day
 - b. Sort on: Values
 - c. Order: A to Z
8. In the third section make these selections
 - a. Sort by: Share Cost
 - b. Sort on: Values
 - c. Order: Smallest to Largest
9. Click OK.

PivotTables

1. Make sure that you are on the 2021 North Region Participants worksheet.
2. Select the range A3:I80.
3. Go to the Insert tab on the Ribbon.
4. Click the PivotTables button in the Tables group.
5. Create PivotTable dialog box
 - a. Under Choose the data that you want to analyze
 - i. Select the radial button for Select a table or range (This should be selected by default with the range you selected in step 2.)
 - b. Under Choose where you want the PivotTable report to be placed
 - i. Select the radial button for New Worksheet
 - c. Click OK
6. Click and drag
 - a. Filters: Pickup Day
 - b. Rows: Pickup Location
 - c. Values: Share Cost
7. Click and drag
 - a. Rows: Pickup Day (Click on it from Filters and drag it under Pickup Day in rows)
 - b. Rows: Season under Pickup Location
8. Click and drag
 - a. Filters: Years Participating
9. Change the all Filter from all to 5.
10. Click and drag
 - a. Columns: Season (Click on it from Rows and drag it to Columns)
 - b. Rows: Share ID under Pickup Day
11. Change the all Filter from 5 to all.
12. Click and drag
 - a. Columns: Remove Season by click and dragging up into the fields
 - b. Columns: Share ID (Click on it from Rows and drag it to Columns)
13. Under Values:
 - a. Click drop down button in Sum of Share Cost
 - i. At the bottom of the list choose Value Field Settings

- ii. Change the selection from Sum to Count
 - iii. Click OK
 - b. Click drop down button in Sum of Share Cost
 - i. At the bottom of the list choose Value Field Settings
 - ii. Change the selection from Count to Average
 - iii. Click OK
 - c. Click drop down button in Sum of Share Cost
 - i. At the bottom of the list choose Value Field Settings
 - ii. Change the selection from Average to Max
 - iii. Click OK
- 14. Go back to 2021 North Region Participants worksheet.
- 15. Change these cell values
 - a. I4:400
 - b. I14: 300
 - c. I23: 500
 - d. I33: 350
 - e. I36: 800
 - f. I45: 375
 - g. I55: 800
 - h. I63: 250
 - i. I77: 220
- 16. Go back to the sheet1 worksheet
- 17. Right click the PivotTable and select refresh.

Formulas

SUMIF and AVERAGEIF

1. Go to the 2016 Sales Report Worksheet
2. We are going to use the SUMIF formula to determine the 2015 sales for the North, South, and West regions. Go to cell I5 and click the FX button to open the function builder.
3. In search for a function type SUMIF and click go.
4. In the Select a function make sure SUMIF is selected and click OK.
5. In the Function Arguments dialog box:
 - a. In Range key in the "Region" range. (B4:B54)
 - b. For criteria, key in the region we are looking for in for cell I5. (North)
 - c. In Sum_Range key in range for "Prior Year". (C4:C54)
 - d. Click OK.
6. Follow steps 3 through 5 to find the sales for the South and West regions. You will want to replace the North with South and West when building your function.
7. We are going to use the AVERAGEIF formula to determine the average product sales for baseball bats, baseball helmets and baseballs for the 2016 and 2015 year. Go to cell H12 and click the FX button to open the function builder.
8. In search for a function type AVERAGEIF and click go.

9. In the Select a function make sure AVERAGEIF is selected and click OK.
10. In the Function Arguments dialog box:
 - a. In Range key in the "Product" range. (A4:A54)
 - b. For criteria, key in the product that we are looking for the average. (Baseball Bats)
 - c. In Sum_Range key in range for 2015 sales. (D4:D54)
 - d. Click OK.
11. Follow steps 7 through 10 to find the average product sales for the remaining products for 2015 and 2016. Make sure select the correct sales year when building your function.

IF and COUNTIF

1. Go to the Vendor Invoices Worksheet
2. We need to find out how many vendors owe us money. We are going to use the COUNTIF function to tell us the number of vendors with a balance. Go to cell I9 and click the FX button to open the function builder.
3. In search for a function type COUNTIF and click go.
4. In the Select a function make sure COUNTIF is selected and click OK.
5. In the Function Arguments dialog box:
 - a. In the Range key in the "Balance" range. (E104:E54)
 - b. For criteria, we want Excel to count anything greater than 0.00. (>0)
 - c. Click OK.
6. We need to send letters out to vendors with a balance. We will use the IF formula to tell which vendors that will get this letter. Go to cell F10 and click the FX button to open the function builder.
7. In search for a function type IF and click go.
8. In the Select a function make sure IF is selected and click OK.
9. In the Function Arguments dialog box:
 - a. In the Logical_test you will want Excel to test if the vendor balance is greater than 0. (E10>0)
 - b. In the Value_if_true type the text "Send a reminder Letter". (Excel will add the quotes for you)
 - c. In the Value_if_false type the text "No Letter Needed".
 - d. Click OK.
10. Repeat steps 7-9 for F11 and F12.
11. Use drag fill for the other vendors.
12. Vendors that who are late on their bills are charged a 5% late fee. We will use the IF formula to calculate the new balance for these vendors. Go to cell G10 and click the FX button to open the function builder.
13. In search for a function type IF and click go.
14. In the Select a function make sure IF is selected and click OK.
15. In the Function Arguments dialog box:
 - a. In the Logical_test you will want Excel to test if the vendor balance is greater than 0. (E10>0)

- b. In the Value_if_true type the cell reference that has the balance and multiple it by 1.05. (E10*1.05 or E10*105%)
 - c. Leave the Value_if_false empty.
 - d. Click OK.
16. Repeat steps 13-15 for G11 and G12.
17. Use drag fill for the other vendors.

Nested IF Statements

1. We need to figure out how much income tax is going to be assessed. We will use two IF functions to figure this out. There is an income tax of 22% on income greater than \$38,700, an income tax of 12% between 38,699 and \$9,500, and no income tax on income of \$9,500 or less. Go to the nesting worksheet.
2. Put your cursor in C14 and click the FX button to open the function builder.
3. In search for a function type IF and click go.
4. In the Select a function make sure IF is selected and click OK.
5. In the Function Arguments dialog box:
 - a. In the Logical_test you will want Excel to test if the income is greater than \$9,500. (B14>9500)
 - b. In the Value_if_true we want Excel to multiply the income by 12%. (B14*.12 or B14*12%)
 - c. In the Value_if_false put 0.
 - d. Click OK.
6. In the formula bar highlight and cut everything but the = symbol. IF(B14>9500, B14*0.12,0)
7. With your cursor still in C2 click the FX button to open the function builder.
8. In search for a function type IF and click go.
9. In the Select a function make sure IF is selected and click OK.
10. In the Function Arguments dialog box:
 - a. Go to the Value_if_false section first and paste the formula you just cut from the formula bar. IF(B14>9500, B14*0.12,0)
 - b. In the Logical_test you will want Excel to test if the income is greater than or equal to \$38,700. (B14>=38700)
 - c. In the Value_if_true we want Excel to multiply the income by 12%. (B14*.22 or B14*22%)
 - d. Click OK.
11. Use drag fill to copy the formula to the other clients
12. Delete the data in C14:C19 in order to do the next activity.

VLOOKUP

1. Put your cursor in C14 and click the FX button to open the function builder.
2. In search for a function type VLOOKUP and click go.
3. In the Select a function make sure VLOOKUP is selected and click OK.
4. In the Function Arguments dialog box:

- a. In the Lookup_value you want to select the income value. (B14)
 - b. In the Table_array you want to select the table range that contains the tax rate. (A2:B8)
 - i. You must make this reference an absolute reference so that when you use drag fill the table reference stays the same.
 - ii. Your Table_array should look like this \$A\$2:\$B\$8
 - c. In the Col_index_num key in 2. The 2 references the second column which is the rate you want to return.
 - d. Leave Range_lookup empty.
 - e. Click OK.
5. With C14 still selected, put your cursor at the end of the formula found in the Formula Bar and key in *B14. The Formula Bar should now display =VLOOKUP(B14,\$A\$2:\$B\$8,2)*B14.
 6. Use drag fill to find the income tax for the other clients.