Excel Refresher 2 Transcript

Title Screen

Narrator: No audio

Screen 1

Screen Title: Microsoft Excel 2013

Screen Content

No content

Narrator: In this module, we will continue learning about Excel. We will learn more about formulas and functions, and also how to generate charts based on the data in our spreadsheets.

Screen 2

Screen Title: Key Points

Screen Content

- Relative versus absolute cell references in formulas
- Two Excel functions
- Charts

Narrator: Excel has a powerful but confusing feature when you are using cell references in formulas. In this presentation, we will discuss the differences between relative and absolute cell references and when you should use them. Excel functions can also be confusing for students. We will discuss two functions, the TODAY function and the VLOOKUP function. Finally, by default, when you generate a new chart in Excel, it will embed that chart on the currently selected spreadsheet. It is also possible to move that chart to its own sheet, called a chart sheet. We will cover the steps you can take to move a chart to a chart sheet.

Screen 3

Screen Title: Relative Cell References

Screen Content

[Screen capture a Microsoft Excel 2013 document with the function and corresponding result cell E4 highlighted]

Narrator: When you copy a formula from one cell to another, Excel automatically adjusts your formula to reflect its new position in the spreadsheet. For example, this formula sums the annual sales in cells B4, C4, and D4.
Screen 4

Screen Title: Relative Cell References

Screen Content

[Screen capture a Microsoft Excel 2013 document with the function and corresponding result cell E5 highlighted]

Narrator: If we copy and paste the formula one row down to cell E5, Excel adjusts the cell references one row down so it now sums the annual sales in cells B5, C5 and D5. The cell references in this formula are called relative cell references because when you copy or move them, they are adjusted relative to their old position. Most of the time this is what we want Excel to do.

Screen 5

Screen Title: Absolute Cell References

Screen Content

No content

Narrator: However, there are times when one or more of the cell references in your formulas should always refer to the same cell. In this case you need to use absolute cell references. You indicate an absolute cell reference by placing dollar signs in front of the column letter, the row number, or both.

Screen 6

Screen Title: Absolute Cell References

Screen Content

[Screen capture a Microsoft Excel 2013 document with the function =D4+(D4*J3) and corresponding result cell G4 highlighted]

Narrator: Let's take a look at this in action. The formula in cell G4 takes the year-to-date annual sales for 2014 and adds to that the projected increase based on the percentage in cell J3.
Screen 7

Screen Title: Absolute Cell References

Screen Content

(Screen capture a Microsoft Excel 2013 document with the function =D5+(D5*J4) and corresponding result cell G5 highlighted]

Narrator: If we copy and paste the formula one row down to cell G5, notice that Excel has adjusted each of the cell references one row down. This is what we want for the blue widgets sales in cell D5, but the cell reference to the projected increase in cell J3 has also been adjusted to the empty cell J4. Our formula is now just reporting the year-to-date annual sales for blue widgets in 2014 instead of adding the projected increase to that number.

Screen 8

Screen Title: Absolute Cell References

Screen Content

(Screen capture a Microsoft Excel 2013 document with the function =D4+(D4*$J$3) and corresponding result cell G4 highlighted]

Narrator: We need to use an absolute cell reference for the projected increase in cell J3. To do this, we need to insert a dollar sign before the “J” and before the “3”.

Screen 9

Screen Title: Absolute Cell References

Screen Content

(Screen capture a Microsoft Excel 2013 document with the function =D5+(D5*$J$3) and corresponding result cell G5 highlighted]

Narrator: Now if we copy and paste the formula to cell G5, notice that Excel has not adjusted the reference to the projected increase in cell J3 in our formula.
Screen 10

Screen Title: Absolute Cell References

Screen Content

[Screen capture a Microsoft Excel 2013 document with the function =D6+(D6*$J$3) and corresponding result cell G6 highlighted]

Narrator: Taking this a step further, if we copy and paste the formula to cell G6, Excel adjusts the cell references to the 2014 year-to-date annual sales in column D but does not change the cell reference to the projected increase in cell J3. In your formulas, when you need a cell reference to always refer to the same cell, be sure to use an absolute cell reference by using dollar signs as we have done here.

Screen 11

Screen Title: Excel Functions

Screen Content

- TODAY() function
  - To display today’s date
    =TODAY()
  - To display the date one week from now
    =TODAY()+7

Narrator: Let’s begin our discussion of the two functions mentioned earlier. The TODAY function displays the current date.

Screen 12

Screen Title: TODAY() Function

Screen Content

[Screen capture a Microsoft Excel 2013 document with the function =TODAY() and corresponding result cell B4 highlighted]

Narrator: To use it, select the desired cell in your spreadsheet and type an equal sign, TODAY, an open parenthesis and a close parenthesis. For this example, we have selected cell B4 in which to type the TODAY function. You should not include anything inside the parentheses, but the parentheses must appear in the formula.
Narrator: You can also perform arithmetic on the TODAY function. If you wanted to display the date a week from now, you could use the TODAY function followed by a plus sign and the number 7. Let’s go to cell B5 to see this in action. Type an equal sign, TODAY, an open parenthesis, a close parenthesis, a plus sign, the number 7, and press Enter.

Narrator: Let’s move on to the other function we are going to look at. The VLOOKUP function is a very powerful function but it can also be confusing when you first learn about it. It allows you to find information organized in a table. As an example, imagine that you work for Acme Widgets and are responsible for reordering parts. You have a long list of Acme widget part numbers and the suppliers for those parts.

Narrator: Trying to find the information you need can be a long and tedious process. You would be much more efficient at your job if you could type a part number and …
Quickly find out the supplier, supplier's phone number, and unit price for that part.

=VLOOKUP("SJX5353")

You could type the part number directly in the formula. However, you want to be able to type any part number in cell B3 and find the supplier for that part.
Screen 19

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with cell B3 highlighted]

=VLOOKUP(B3,

Narrator: Instead of typing the part number in the formula, we will use the cell reference B3 instead. This way the formula will work with any part number you type in cell B3.

Screen 20

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with cells A7 through E79 highlighted]

=VLOOKUP(B3, A8:E79,

Narrator: The second argument for the VLOOKUP function is the range of cells that contain the table you want to use for looking up values. The supplier parts table is contained in the range A8:E79. You don’t need to include headings when specifying the range of cells for your table.

Screen 21

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price]

=VLOOKUP(B3, A8:E79, 2,

Narrator: The third argument for the VLOOKUP function is the column number for the column that contains the value you want to return. You want the supplier’s name, which is in the second column.
Screen 22

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price]

=VLOOKUP(B3, A8:E79, 2, FALSE)

Narrator: The fourth argument may be either TRUE or FALSE—TRUE if you want Excel to use the closest value in the table to your lookup value, also known as an approximate match, or FALSE if you want Excel to only use an exact match.

Screen 23

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with function =VLOOKUP($B$3, $A$8:$E$79, 2, FALSE) highlighted]

Narrator: This is how the final formula will look in cell E3. Notice that we are using absolute cell references for the lookup value in cell B3 and the range of cells for the table because if we copy and paste this formula, we do not want those cell references to change. Notice also that cell E3 displays the results of the formula, Widget Parts Incorporated, which is the correct supplier for part number SJX5353.

Screen 24

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with function =VLOOKUP(B3, A8:E79, 3, FALSE) highlighted]

Narrator: To show the phone number for the supplier, we can copy the formula in cell E3 since we used absolute cell references.
The only thing that needs to change is the third number in the parentheses, which specifies the column in the table that contains the value to display. The supplier phone number is in column 3.

Screen 25

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with function =VLOOKUP(B3, A8:E79, 5, FALSE) highlighted]

Narrator: We have done something similar to display the supplier’s unit price for the part. Notice that while there are only four columns of information in the table, the phone numbers are merged across columns C and D so there are actually five spreadsheet columns in our table.

Screen 26

Screen Title: VLOOKUP() Function

Screen Content

=VLOOKUP(lookup value, table range, column number, approximate match?)

[Screen capture a Microsoft Excel 2013 document displaying a list of part numbers, suppliers, phone numbers, and unit price with cell B3 highlighted]

Narrator: Watch what happens when the part number is changed in cell B3. If we select cell B3, type QLA6609, and press Enter, the supplier in cell E3 correctly changes to Small Parts Suppliers and the phone number and unit price also change to display the correct values for this part.

Screen 27

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[Screen capture a Microsoft Excel 2013 document displaying red, blue, and green widget sales for 2012, 2013, and 2014 and a chart]

Narrator: Now let’s take a look at embedding charts on a spreadsheet versus a chart sheet. When you insert a new chart in Excel, by default that chart is embedded in the currently active sheet. There are times, however, when you will want a chart to appear on a sheet of its own. In this case, you need to move the chart to a chart sheet.
Screen 28

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[Screen capture a Microsoft Excel 2013 document displaying red, blue, and green widget sales for 2012, 2013, and 2014 and a chart; CHART TOOLS → DESIGN tab is selected]

Narrator: To move a chart to its own sheet, select that chart, then click on the Chart Tools Design tab in the Ribbon.

Screen 29

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[Screen capture a Microsoft Excel 2013 document displaying red, blue, and green widget sales for 2012, 2013, and 2014 and a chart; Move Chart is highlighted]

Narrator: Next, you will click on the Move Chart button in the Location group.

Screen 30

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[Move Chart window displayed with New Sheet selected]

Narrator: When the Move Chart dialog box appears, select the New sheet option to move your chart to a new chart sheet.

Screen 31

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[Move Chart window displayed with New Sheet selected and Sales Chart typed into the box]

Narrator: Enter the name you want for your chart sheet beside the New sheet option. In this example, we will type Sales Chart as the name for the new chart sheet. Notice that you also have the option to move your chart to one of your existing sheets using the Object in option.
Screen 32

Screen Title: Embedding Charts versus a Chart Sheet

Screen Content

[New sheet displayed with only Sales Chart]

Narrator: To complete this action, click on the OK button to move your chart. Placing your chart on a chart sheet allows you to devote an entire sheet to the display of your chart.

Screen 33

Screen Title: Summary

Screen Content

[Stacked blocks spelling out LEARN]

Narrator: In summary, we discussed how Excel adjusts the cell references in your formulas when you copy or move them relative to the location of the original formula. These are called relative cell references. If you need one or more of the cell references in your formula to always refer to the same cells in your spreadsheet, you should use absolute cell references by placing dollar signs in front of those cell references in your formulas.

We also looked at how to use two functions in our formulas. The TODAY function displays today's date, while the VLOOKUP function allows us to lookup a certain value in a table of information and return a related value in a different column of that table.

Finally, we discussed how to move a chart from a spreadsheet to a chart sheet of its own.

End of presentation