
Lesson 7 Creating Formulas by Pointing and Copying

Lesson Topics

- Pointing to Create Formulas
- Copying Formulas
- The Fill Handle

Lesson Objectives

At the end of the lesson, you will be able to:

- Use the pointing method to create formulas;
- Use the copying method to create formulas;
- Use the Fill handle to copy formulas to adjacent cells.

Student Files Used

You will use the following file from your student folder:

- Miller's Shoes 3

Student Files Created

You will not save any new files to your student folder.

Pointing to Create Formulas

In this lesson, you are going to learn to write formulas faster and more accurately by *pointing* to cells and by *copying* formulas to other cells.

Up to now, you have been manually typing the cell references in the formulas that you have created. For example, you typed every character of the formula `=B6+B7+B8`. Excel provides you with an easier way to enter formulas. If you point to a cell, Excel will automatically enter its cell reference into the formula. Using this method, there is less of a chance for error.

You are going to delete the formulas in *Miller's Shoes 3* and then enter them using the pointing method.

1. **Open *Miller's Shoes 3*.**
2. **Select B10:D10.**
3. **Hold down the CTRL key and select B14:D14.**
4. **Hold down the CTRL key and select E6:E14.**

You have selected all the cells with formulas.

	A	B	C	D	E
1	MILLER'S SHOE DEPARTMENT				
2					
3		Jan	Feb	Mar	Total
4					
5	Footwear:				
6	Children	400	(100)	(50)	250
7	Men	2,000	2,500	3,000	7,500
8	Women	3,500	3,000	4,000	10,500
9					
10	Total	\$5,900	\$5,400	\$6,950	\$18,250
11					
12	Expenses	4,000	3,500	3,000	10,500
13					
14	Profit	\$1,900	\$1,900	\$3,950	\$7,750

5. **On the Edit menu, point to *Clear* and then choose *Contents*.**

You have deleted all the formulas (but not the formats). You could also have simply tapped the DELETE key.

You are going to enter the formulas using the pointing method.

1. **Go to B10.**
2. **Type an equal sign (=).**

At this point you would ordinarily type *B6*. This time, however, you are going to point to this cell.

3. Click B6.

Notice that B6 has a flashing marquee around it and B6 appears in cell B10 and on the Formula bar as part of the formula. Also notice *Point* on the Status bar, which is your current activity.

	A	B
1		MILLER'S SHOES
2		
3		Jan
4		
5	Footwear:	
6	Children	400
7	Men	2,000
8	Women	3,500
9		
10	Total	=B6
11		
12	Expenses	4,000
13		
14	Profit	
15		
16		
17		
18		
19		
20		
21		
22		
23		

4. Type a plus sign (+).

=B6+ is displayed on the Formula bar.

5. Click B7.

The marquee is placed around B7 and B7 appears on the Formula bar.

6. Type a plus sign (+).

7. Click B8.

The formula is complete.

8. Tap the ENTER key.

9. Go to B10.

Notice the formula $=B6+B7+B8$ on the Formula bar and the result of the formula in the cell. Notice that the cell still has the *Currency* format.

To summarize: Operators (=, +, -, etc.) have to be typed manually. Cell addresses can be entered by pointing and clicking on them. The method is not only easier than typing, but provides a greater degree of accuracy.

10. Go to C10 and enter the formula by repeating steps 2-8. (Substitute column C for B, of course.)

11. When finished, go to D10 and do the same thing.

Using the pointing method, you are going to enter formulas in E6, E7, and E8.

1. **Go to E6.**
2. **Type an equal sign (=).**
3. **Click B6.**

B6 has a marquee around it and *B6* appears on the Formula bar as part of the formula.

	A	B	C	D	E
4					
5	Footwear:				
6	Children	400	(100)	(50)	=B6
7					

4. **Type a plus sign (+).**
5. **Click C6.**
6. **Type a plus sign (+).**
7. **Click D6.**
8. **Tap the ENTER key.**
9. **Go to E6.**

Notice the formula on the Formula bar and the result in the cell.

10. **Go to E7 and enter the formula by repeating steps 2-8. Substitute row 7 for row 6, of course.**
11. **When finished, go to E8 and do the same thing.**

Note: The workbook is still missing some formulas, but before you enter them, you are going to learn to use the Copy function.

Copying Formulas

A moment ago, to gain skill with the pointing method, you were asked to type six separate formulas. There is an easier method. You can copy a formula to other cells and Excel will automatically change the *relative* cell references. You will learn more about copying information in a later lesson. For now, you will copy formulas only.

You are going to delete the formulas in C10, D10, E7, and E8, and enter them again by copying.

1. **Select C10:D10. You will not delete the formula in B10 because that is the formula you are going to copy.**
2. **Hold down the CTRL key and select E7:E8. (You will not delete the formula in E6.)**
3. **Tap the DELETE key.**

When you copy information, it goes to a section of memory called the *Clipboard*. You can then paste the contents of the Clipboard somewhere else.

You are going to copy the formula in B10 to C10 and then to D10.

1. **Go to B10.**
2. **On the Edit menu, choose *Copy*.**

In addition to its dark border (indicating that it is the active cell), B10 has a *marquee* around it, indicating that it has been copied to the Clipboard.
3. Now that you have copied the cell, you have to indicate its destination.

Notice the message on the Status bar: *Select destination and press ENTER or choose Paste*. If you choose *Paste*, the information remains in the Clipboard and can be pasted again. If you tap the ENTER key, the information cannot be pasted again.

Select C10:D10.

4. **On the Edit menu, choose *Paste*.**

You have pasted the contents of the Clipboard.
Notice that the formula was copied into C10 and D10.
5. **Go to C10 and D10 and notice (on the Formula bar) that Excel has changed the column letters. The formula in C10 is $=C6+C7+C8$ and the formula in D10 is $=D6+D7+D8$. Excel changed the relative cell references.**

The marquee is still flashing around B10, indicating that the range can be pasted again. If you tap the ESC key, the ENTER key, use the *Clear* command, or merely type something in another cell, the marquee will disappear and you will not be able to paste it again with this method.

6. Tap the ESC key so the marquee will disappear.

Note: When you copy a cell, everything is copied, including the format. Therefore, when it is pasted to another cell, the format in the source cell replaces the one in the destination cell.

You are going to enter the formulas in B14:D14 by pointing and by copying.

- 1. Go to B14.**
- 2. Type an equal sign (=).**
- 3. Click B10.**
- 4. Type a minus sign (-).**
- 5. Click B12.**
- 6. Tap the ENTER key.**

The formula has been entered.

- 7. You are going to copy this formula to C14 and D14.**

Go to B14.

- 8. From now on, when we want you to copy something, we will ask you to use CTRL/C. You can, if you prefer, click the Copy button on the Standard toolbar or choose *Copy* on the Edit menu.**

Use CTRL/C.

Notice the flashing marquee around B14. The information in this cell is now in the Clipboard.

- 9. Select C14:D14.**
- 10. If you tap the ENTER key to complete the procedure, rather than choose *Paste*, the marquee will automatically disappear.**

Tap the ENTER key.

The contents of the Clipboard are pasted. The formula has been copied to C14:D14. Notice that the marquee is gone.

- 11. Go to C14 and D14 and notice that Excel has changed the column letters. The formula in C14 is =C10-C12 and the formula in D14 is =D10-D12. Excel has changed the *relative* cell references.**

You are going to copy the formula in E6 down the column.

- 1. Go to E6.**
- 2. Use CTRL/C.**
- 3. Select cells E7:E14.**
- 4. Tap the ENTER key.**

The contents of the Clipboard have been pasted. Because you used the ENTER key to complete the procedure, rather than the *Paste* command, the marquee disappears.

- 5. Go to each cell in the column and notice that Excel has changed the row numbers. The relative cell references have been adjusted.**
6. Cells E9, E11, and E13 have zeros in them because the formulas in these cells have nothing to add. You are going to delete these formulas.

Go to E9.

- 7. CTRL/click in E11 and E13.**

E9, E11, and E13 should be selected.

- 8. Tap the DELETE key.**

9. The numbers in E10 and E14 have no dollar signs. This is because you copied E6, which has a format without dollar signs. When you use the *Copy* command, the format as well as the content is copied. You are going to change the format of E10 and E14 back to the *Currency* format.

Go to E10.

- 10. CTRL/click in E14.**

Both cells should be selected.

- 11. On the Format menu, choose *Cells*.**
- 12. Verify that the Number tab is displayed.**
- 13. Choose *Currency* in the *Category* list box.**
- 14. Verify that there are 0 decimal places and negative numbers will be enclosed within parentheses.**
- 15. Click OK.**

Notice the format for E10 and E14.

The Fill Handle

An easy way to copy formulas to adjacent cells is to use the *Fill handle*, which is the handle in the lower right corner of the active cell.



If a range is selected, the Fill handle is in the lower right corner of the last cell in the range.

- 1. Erase the formulas in C10:D10, C14:D14, and E7:E14.**
- 2. Go to B10.**
- 3. Position the pointer over the Fill handle and notice that it turns into a cross-hair like this: +**

Note: If the pointer does not turn into a cross-hair in the following instructions, choose *Options* on the Tools menu and then select the *Allow cell drag and drop* option on the Edit tab.

- 4. Hold down the mouse button, drag the cross-hair to D10, and then release.**

Notice that the formula was copied.

- 5. Go to B14.**
- 6. Position the pointer over the Fill handle until it turns into a cross-hair.**
- 7. Drag the cross-hair to D14 and then release.**

Notice that the formula was copied.

- 8. Go to E6.**
- 9. Position the pointer over the Fill handle until it turns into a cross-hair.**
- 10. Drag to E14 and release.**

The copy is complete.

Note: When copying with the Fill handle, the range is not copied to the Clipboard. Also, when dragging the Fill handle, be careful not to reverse direction and release over the cell being copied. If you do, the contents of the cell will be deleted.