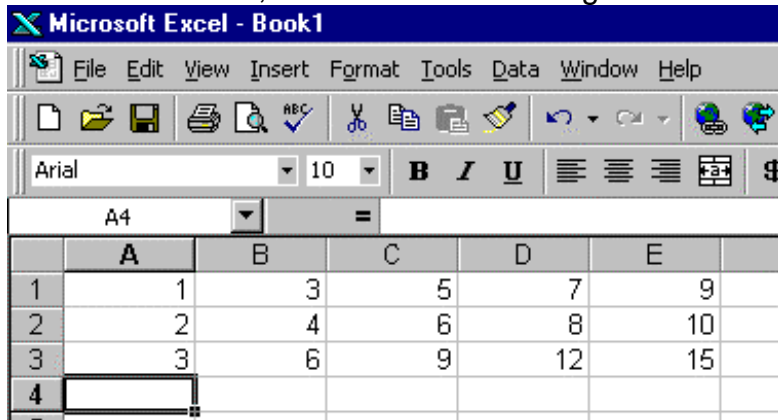


There are a number of methods to enter formulas in Excel (remember, a formula is a cell that starts with an equal sign and involves calculations with other cells). We will be going over the different methods of entering formulas.

Start Excel, and enter the following numbers in the following cells:



Next, go to cell F1, and enter a formula to add the cells A1, C1 and E1. One way to do this is to manually enter the formula: **=A1+C1+E1**. Copy this formula to F2.

You have already done an exercise using the AutoSum button, but let's make sure you know how the sum functions works, and how to enter one manually. Go to cell A4. We want to add the cells A1, A2 and A3. You could just hit the AutoSum button, but let's put it in manually. As with all formulas, start with an equals (=) sign. After the equals sign, type in the word **sum**. Next, type an open parenthesis (, and then the cells to be summed, separated by a column **A1,A2,A3**. Finish with a closed parenthesis). Hit ENTER and the formula should work.

Next, go to cell B4. We'll type in the same formula with a slight twist. This time, we'll use the cell range feature. Type the formula **=sum(B1:B3)**. You will notice that cell B2 is not mentioned. The colon (:) means range; all cells B1 through B3 are affected by the formula (in this case, they are summed).

Now, go to F4 and manually enter a formula to add all the numbers in columns A, B, C, D, and E.

If you entered **=sum(a1:e3)**, you were right!

How do you know for sure if you typed the formula in correctly? If there is an obvious error, Excel will let you know, and even try to fix it. However, if you put the incorrect cell numbers, you wouldn't know unless you got your calculator out and manually checked. There is a better way, a method almost **no one** knows about. It's called Auditing.

Auditing is a feature that is invaluable when you are working with formulas. It is also a feature that is unsupported; in other words, if you were to go into Excel help, it does not mention Auditing at all. You are now among the rare few that will be able to use this feature.

To bring it up, pull down the Tools menu, and select Customize. Make sure the toolbars tab is selected, and look for auditing. Check the box. A toolbar like the one below will appear.



Click on the title bar and drag the toolbar towards the bottom of the screen, so that it 'docks' on the bottom without the title bar. You will mostly use the two buttons on the left the most. Let's see how it works.

Go to cell F2. Then click on the 'Trace precedents' icon. Notice that a blue line with an arrow pointing to your cell has appeared. The line has circles on it, representing which cells are being used to calculate the cell the arrow is pointing to. (Don't do this, but when you need to get rid of the arrows, click on the 'Remove precedent arrows' icon.)

Go to cell B4, and again, audit those cells by clicking on the 'Trace precedents' icon.

You should now have two lines with arrows on your spreadsheet. For a final check of what is really going on in your spreadsheet, let's choose the Display Formulas option. This will allow you to see all the formulas you have entered, instead of the formula result. Before you do this, save your document as **8-5 Intermediate**. Now, to show the formulas, hold down the CTRL key and press ` (this is the key just to the left of the 1 key, and just above the Tab key (some computers may not be setup to do this)).

Email this spreadsheet to me at rhp@denovodental.com. The subject is **Compapp 11-3 Lastname**.