

## Activity 3: Sum It!

**Overview:** You will learn about the SUM function, which is used to add various cells together. After learning about the function and how it works, you will have the opportunity to apply the function to a spreadsheet file.

About the SUM Function.

A spreadsheet program contains a number of pre-written formulas called functions. Functions involve calculations, so they are still considered to be formulas. Unlike formulas, however, functions are calculations that the spreadsheet already understands how to perform. All you need to do to use a function is specify the cells to which the function should be applied.

What does the SUM function do?

The SUM function automatically adds the numbers found in a specified range of cells. The cells can be selected from a column or a row.

What does the SUM function look like?

All formulas begin with an equal sign, and because SUM is also a formula, it is no exception. The function must also include a range of cells to which the calculation will be applied. An example is `=SUM(A1:A5)`.

(A1:A5) is the way that the range of cells is designated. Rather than typing (A1,A2,A3,A4,A5), the colon indicates that all of the cells between the first one listed and last one listed should also be included in the calculation. The word "Sum" is not case sensitive.

How does the SUM function work?

- A. To use the SUM function to find the sum of the numbers located in cells A1, A2, A3, A4, and A5, you first click the cell in which you would like the sum to be displayed. In this case, A6 might be an appropriate cell in which to display the sum. Enter the following data into a spreadsheet file, and then click cell A6.

	A
1	756
2	5678
3	234
4	87
5	567
6	

- B. Next, type `=SUM(A1:A5)` and press <Enter>.

A6	=	=SUM(A1:A5)		
Book1				
	A	B	C	D
1	756			
2	5678			
3	234			
4	87			
5	567			
6	7322			

- C. You will see that the sum is displayed in cell A6 while the actual function is displayed in the Entry Bar. If you need to change the function, do so in the Entry Bar.

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An alternative to typing `=SUM(A1:A5)` is to click the summation button from the Standard Toolbar.

- A. Delete the contents of cell A6.
- B. Click cell A6.
- C. Click the summation button from the Standard Toolbar.



- D. The spreadsheet will try to predict what cells to add by examining where data is entered in relation to the cell in which the sum will be placed. It puts a selection rectangle around these cells so that you can verify that they are, indeed, the correct ones.

AVERAGE				
X ✓ = =SUM(A1:A5)				
Book1				
	A	B	C	D
1	756			
2	5678			
3	234			
4	87			
5	567			
6	=SUM(A1:A5)			

- E. If you wish to change the range that the spreadsheet program predicted, you can make the change in the Entry Bar.
- F. Press <Enter>. You will see the sum in cell A6, just as you did when you typed `=SUM(A1:A5)`.
- G. What would the function look like if you wanted to add the contents of cells B3, B4, B5, and B6?

The same function format is used to find the sum of numbers contained in a row. The only adjustment from the above function is in specifying the range of cells to which the function should be applied.

F1						
= =SUM(A1:E1)						
Book1						
	A	B	C	D	E	F
1	83	801	272	546	21	1723

What would the function look like if you wanted to add the contents of cells C5, D5, E5, and F5?

### Your turn to try!

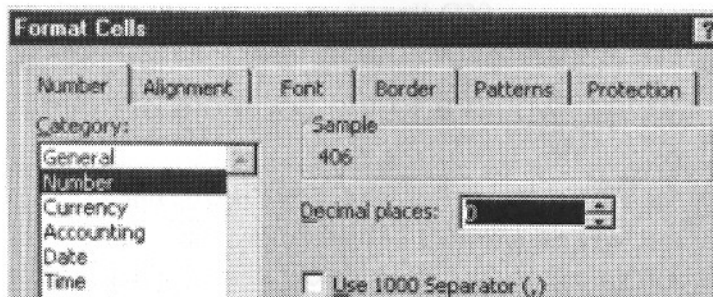
1. Open a new spreadsheet file.
2. Checking Settings
  - A. Go to **VIEW**.
  - B. Make sure there is a check in front of **Formula Bar**.
  - C. Go to **Toolbars**. Make sure there are checks in front of **Standard** and **Formatting**.
  - D. Go to **Toolbars** again. Click **Customize**. Click the **Options** tab. If there is a check in front of "Menus show recently used commands first," remove it.

## Activity 3: Sum It! (cont.)

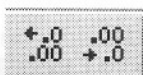
3. Enter text and numbers into the spreadsheet file so it looks like this.

	A	B	C	D	E
1		23	1998		
2		45	3456		
3		67	2134		
4		89	5678		
5		23	3214		
6		45	8765		
7		12	9876		
8		35	2334		
9		67	1212		
10	<b>SUM</b>				

4. Right-align and bold the contents of cell A10. Click the cell and then use the appropriate buttons in the Formatting Toolbar.
5. Entering the functions
- Click cell B10.
  - Type `=SUM(B1:B9)` and press <Enter> OR click the summation button from the Standard Toolbar.
  - Click cell C10.
  - Add the numbers in Column C. Use the SUM function or the summation button to do this.
  - What does the function look like?
  - Add numerical data to Columns D and E. In D10 and E10, insert the function that will provide the sum for each of these columns of data.
6. Make sure the cells containing the row sums are set to display data with no decimals. If you need to change the settings, go to **FORMAT** and select **Cells**. Click the **Number** Tab and set the number of decimals to 0.



You can also click the **increase/decrease decimal** buttons from the Formatting Toolbar to make this change.



7. Add a footer to the document. Go to **VIEW** and choose **Header and Footer**. Click the **Header/Footer** tab. Click the **Custom Footer** button. In the box labeled "Center Section," type *Activity 3*, press <Enter> and type *your name*. Click **OK**.

### Activity 3: Sum It! (cont.)

8. Save the document. Name the file *SS Act 3*. Follow the instructions on page 8 if you need to review the save process.
9. Print the spreadsheet with answers displayed. Go to **FILE** and select **Print**. Click **OK**.
10. Print the spreadsheet with formulas displayed.
  - A. Go to **TOOLS**. Choose **Options**.
  - B. Click the **View** tab. Put a check in the box in front of "Formulas." Click **OK**.
  - C. Go to **FILE** and select **Print**. Click **OK**.
11. Go to **FILE** and select **Exit**.

### Activity 3: Time to Review

Answer the following questions. Check your responses with those on page 89.

1. Instead of using the SUM function, what formula could you type that would result in the sum of the numbers in column B of your spreadsheet?  
\_\_\_\_\_
2. What is the advantage of using the SUM function over this alternative formula (from your response to question 1)? \_\_\_\_\_  
\_\_\_\_\_
3. What would the function look like that would add the contents of cells K1 through cell K250? \_\_\_\_\_