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# Advanced Excel

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**Talking Points: Multiple Criteria Counts**



Although the Conditional Sum Wizard is expressly intended for use with situations that demand a multiple-condition Sum formula, you can easily alter the wizard's formula to count items that meet multiple conditions.

To demonstrate the concept, we'll use the sample data grid shown below. The upper portion (A2:D11) contains a list of agent names. In cells A14 through E61, a database of items appears. Each item in this list is "assigned" to an agent, with a corresponding item number, date and score. Column D of the data contains "Yes" and "No" values to indicate whether the agent took the correct action with that item. To gauge how well each agent is doing, you might want to count the number of correct items listed for each agent.

The Conditional SUM Wizard provides a formula that will, with some easy alteration, count the number of correct items for each agent.

	A	B	C	D	E
1	<b>January 2005</b>				
2	<b>Agent's Name</b>	<b>Number Reviewed</b>	<b>Number Correct</b>	<b>Percent Correct</b>	
3					
4	Smith	8		0.00%	
5	Tern	4		0.00%	
6	Azinger	8		0.00%	
7	Trabaja	8		0.00%	
		7		0.00%	
		5		0.00%	
		7		0.00%	
		<b>47</b>	<b>0</b>	<b>0.00%</b>	
14	<b>Agent's Name</b>	<b>CR Number</b>	<b>Date</b>	<b>Correct?</b>	<b>Score</b>
15	Azinger	22965470	1-Jan	Y	738
16	Dunlop	15775470	1-Jan	Y	654
17	Dunlop	78675470	1-Jan	Y	805
18	Tern	12665470	1-Jan	Y	609
19	Trabaja	9885470	1-Jan	Y	542
20	Zema	72785470	1-Jan	Y	664
21	Azinger	35026470	2-Jan	N	783

This requires something more complex than COUNTIF because it hinges on two different evaluations: the formula must first determine the name attached to the current item and then determine if the item was correct or not. This means COUNTIF is insufficient for the job. Instead, a more complex formula is necessary. Luckily, the Conditional Sum Wizard and some simple alterations make it easy.

**Step-By-Step: Multiple Criteria Counts**

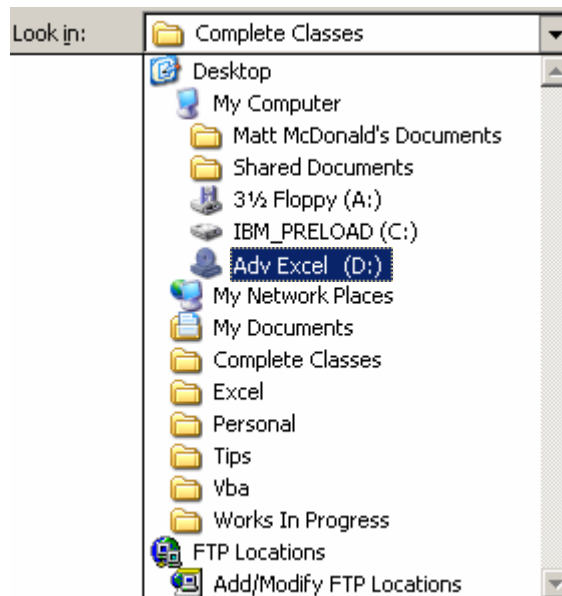
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## GOAL:

Count the number of correct items for each agent by using the Conditional Sum Wizard to create a formula that can be altered to do the job.



1. Place your class CD-ROM in the computer's CD-ROM drive.
2. Start Microsoft Excel.
3. Use the File menu to select "Open...".
4. In the Open dialog box, click the drop-arrow beside the box marked "Look in:" and choose the CD-ROM from the list of locations.

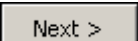


5. Double-click the folder called "Adv Excel Files" to open it.
6. In the list of files, double-click the file called "Multi-Condition COUNT.xls".
7. If necessary, activate the first sheet in the file: "Conditional COUNT".

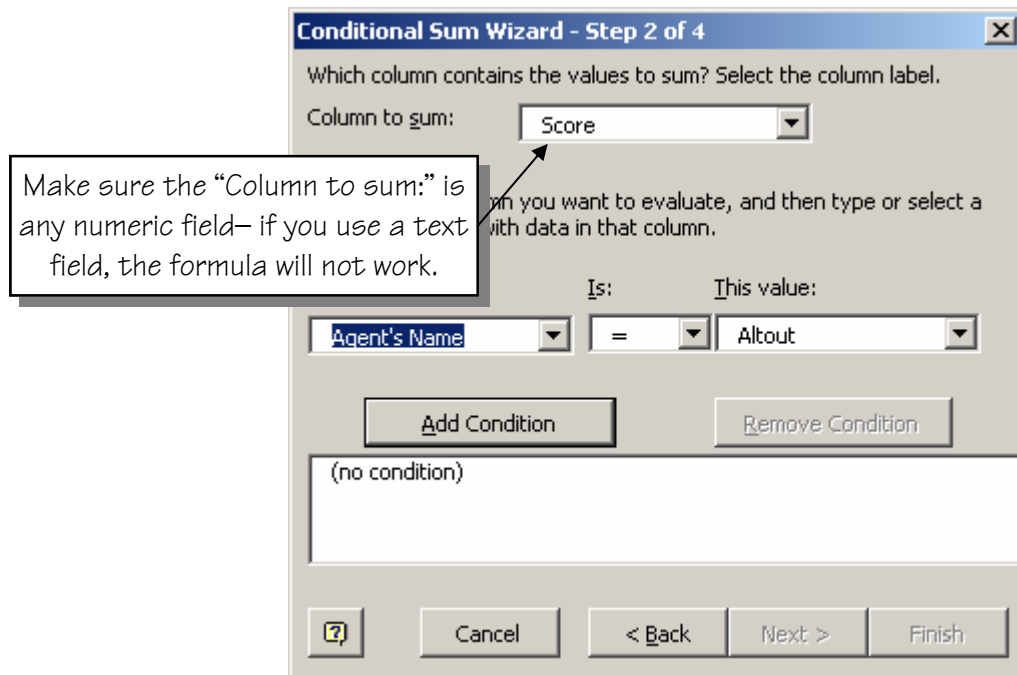
8. Place the cell pointer anywhere in the list, such as cell C17.
9. On the Tools menu, choose “Wizard ►” and then “Conditional Sum...”.




Remember, the wizard will select the proper data range for you as long as you place the cell selector in the data list prior to activating the wizard.

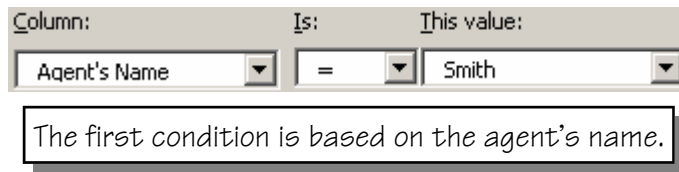
10. Click the  button.

11. At the top of the dialog box, be sure “Column to sum:” is “Score”.



12. Make sure the box marked “Column:” is populated with “Agent’s Name”.
13. The criteria symbol should be set to “=”.
14. Under “This value:”, select “Smith” from the list of agents.

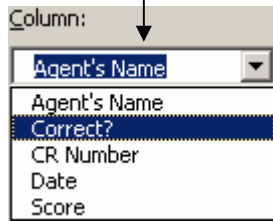
15. Click  .



Column: Agent's Name Is: = This value: Smith

The first condition is based on the agent's name.

16. Now change the “Column:” area to the “Correct?” field.

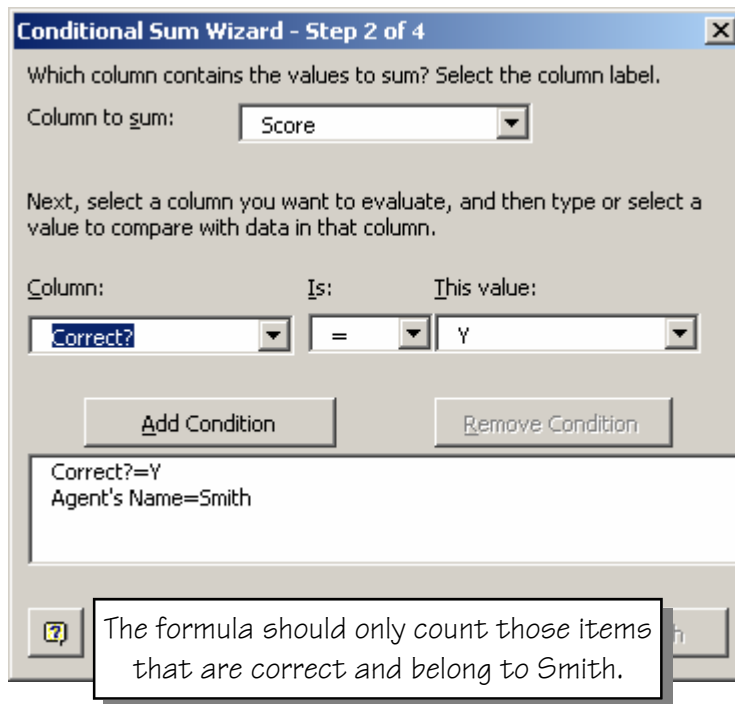


Column:

- Agent's Name
- Correct?
- CR Number
- Date
- Score

17. Under “This value:” choose “Y”.

18. Click  again.



Conditional Sum Wizard - Step 2 of 4

Which column contains the values to sum? Select the column label.

Column to sum: Score


Next, select a column you want to evaluate, and then type or select a value to compare with data in that column.


Column: Correct? Is: = This value: Y

Add Condition Remove Condition


Correct?=Y  
Agent's Name=Smith

The formula should only count those items that are correct and belong to Smith.


19. Click  to go to step 3 of the wizard.

20. Make sure  **Copy just the formula to a single cell.** is selected.

21. Click  again.

22. Click the  button on the right side of the input line.

23. Click cell C4 to mark this as the location for the formula.

24. Click the  button to re-expand the Conditional Sum Wizard dialog box.

25. Click  .


26. Select cell C4.

27. Press F2 on the keyboard to edit the formula.

28. Use the mouse to highlight the portion of the formula that says  
"Smith" (including the quotes).

  
=SUM(IF(\$A\$15:\$A\$61="Smith",IF(\$D\$15:\$D\$61="Y",\$E\$15:\$E\$61,0),0))

29. Click cell A4 to replace "Smith" with a reference to the cell in which that  
person's name appears.

=SUM(IF(\$A\$15:\$A\$61="Smith",IF(\$D\$15:\$D\$61="Y",\$E\$15:\$E\$61,0),0))  
  
=SUM(IF(\$A\$15:\$A\$61=A4,IF(\$D\$15:\$D\$61="Y",\$E\$15:\$E\$61,0),0))

30. Press Ctrl+Shift+Enter.

31. Click cell C4 again if necessary.

32. Press F2 again to alter the formula.



To this point, you have used the Conditional Sum Wizard to create a formula that adds values together, rather than counting. Therefore, the initial result will be invalid. You also changed the formula, making it refer to the location of Smith’s name rather than the hard-coded value of “Smith”.

Agent's Name	Number Reviewed	Number Correct	Percent Correct
Smith	8	3220	40250.00%
Tern	4		0.00%
Azinger	8		0.00%
Trabaja	8		0.00%
Zema	7		0.00%
Altout	5		0.00%
Dunlop	7		0.00%
<b>Totals:</b>	<b>47</b>	<b>3220</b>	<b>6851.06%</b>

Now that we have the basic formula with which to work, all it will take is some simple manipulation to make it a counting formula.

33. At the beginning of the formula, highlight the word “SUM” by clicking-and-dragging over it.

34. Replace the word “SUM” with “COUNT”.

```
=SUM(IF($A$15:$A$61=A4,IF($D$15:$D$61="Y",$E$15:$E$61,0),0))
```

```
=COUNT(IF($A$15:$A$61=A4,IF($D$15:$D$61="Y",$E$15:$E$61,0),0))
```

35. At the right end of the formula, click-and-drag the first “,0” (comma-zero) sequence to select it.

```
=COUNT(IF($A$15:$A$61=A4,IF($D$15:$D$61="Y",$E$15:$E$61,0),0))
```

36. Press Delete on the keyboard to remove the “,0” sequence from the equation.

