

# Consider the following spreadsheet.

	A	B	C	D	E	F	G	H	I	J
1	Rate:	8.27	Name:	Sally, Techwriter			M			
2	Total		547.75	4529.91	0.00	4529.91	165.00	280.85	65.68	4018.38
3										
4	Period ending	Month posted	Hours	5231 Earnings	5241	5231-41 Total	012202 Withhold	012201 FICA	012218 Medicare	Amount
5	January	1	75.50	624.39	0.00	624.39	22.00	38.71	9.05	554.63
6	February	2	42.50	351.48	0.00	351.48	11.00	21.79	5.10	313.59
7	March	3	99.00	818.73	0.00	818.73	33.00	50.77	11.87	723.09
8	April	4	68.50	566.50	0.00	566.50	22.00	35.12	8.22	501.16
9	May	5	69.50	574.77	0.00	574.77	22.00	35.63	8.33	508.81
10	June	6	82.75	684.34	0.00	684.34	22.00	42.43	9.92	609.99
11	July	7	73.00	603.71	0.00	603.71	22.00	37.43	8.76	535.52
12	August	8	37.00	305.99	0.00	305.99	11.00	18.97	4.43	271.59
13	September	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	October	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	November	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	December	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17										
18	Period ending	Month posted	Hours	5231 Earnings	Other	5231-41 Total	012202 Withhold	012201 FICA	012218 Medicare	Amount
19	15-Jan	1	34.5	285.32		285.32	11.00	17.69	4.14	252.49
20	31-Jan	1	41	339.07		339.07	11.00	21.02	4.91	302.14
21	19-Feb	2	42.5	351.48		351.48	11.00	21.79	5.10	313.59
22	3-Mar	3	32	264.64		264.64	11.00	16.41	3.84	233.39

Beginning at row 19 are detail lines giving each paycheck with the month posted in column B. These are totaled by month in rows 5-16. To get this, the formula entered in C5 was copied to all the cells in the range C5:J16. Now look at the formula:

=SUMIF(\$B\$19:\$B\$45, \$B5, C\$19:C\$45)

It sums all values in column C rows 19-45 for which the corresponding value in column B is equal to the value entered in B5. In this case we are summing on the basis of month. Another potential application is to enter codes for expense types and sum by expense type. Notice also the use of relative and non-relative addressing to make sure the formulas copy correctly. In \$B5, the row number automatically adjusts. In C\$19:C\$45, the column number automatically adjusts as the formula is copied. For the first argument of the function, (\$B\$19:\$B\$45), the references are absolute for both column and row and so are not modified by the copy operation.

If we find that we have included too few rows in the detail lines (19 to 45), we can add rows before the last one and Excel will automatically adjust all the formulas to include the newly added rows. This adjustment occurs even for the absolute addresses.

The solid line below row 4 is there because I selected Window, Freeze Panes when A4 was the active cell. The effect is that the first four rows stay on screen even when I scroll down to add detail lines – a great way to keep headings on the screen.

From: Charles Kee, President of the Oak Ridge PC Users Group