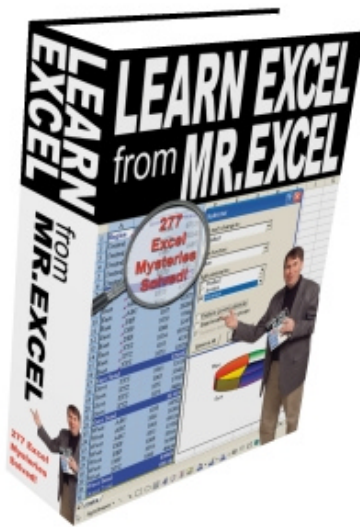




Free Preview – Week #7

Learn Excel from Mr Excel

Copyright 2005 Bill Jelen

All Rights Reserved

Encourage your friends to sign up at

<http://www.mrexcel.com/learn-excel.html>.

This Week: More on Subtotals.

ENTER A GRAND TOTAL OF DATA MANUALLY SUBTOTALLED

Problem: Your manager doesn't know the trick for doing automatic sub-totals. In the example below, he manually entered blank lines between each customer and entered SUM formulas for each customer, as shown in Fig. 682. How can you produce a grand total of all customers?

**Part
III**

	A	B	C	D
1	Acct	Customer	Invoice	Revenue
2	A4368	Ainsworth	1014	10,445
3	A4368	Ainsworth	1015	15,544
4	A4368	Ainsworth	1030	3,922
5	A4368	Ainsworth	1054	12,838
6	A4368	Ainsworth	1091	17,712
7		Total Ainsworth		60,461
8				
9	A3108	Air Canada	1057	5,859
10	A3108	Air Canada	1061	2,358
11	A3108	Air Canada	1090	17,856
12	A3108	Air Canada	1108	4,948
13		Total Air Canada		31,021
14				
15	B4504	Bell Canada	1013	15,104
16	B4504	Bell Canada	1069	18,072
17	B4504	Bell Canada	1074	14,004
18	B4504	Bell Canada	1077	4,060
19		Total Bell Canada		51,240
20				
21	Grand Total			

Fig. 682

Strategy: Think about this dataset. Every sale is actually in there twice. As shown in Fig. 683, the \$4,060 for invoice 1077 is in cell D18 and also totaled into D19. Thus, the formula to enter in D21 is =SUM(D2:D19)/2.

D21		fx =SUM(D2:D20)/2		
	A	B	C	D
1	Acct	Customer	Invoice	Revenue
2	A4368	Ainsworth	1014	10,445
3	A4368	Ainsworth	1015	15,544
4	A4368	Ainsworth	1030	3,922
5	A4368	Ainsworth	1054	12,838
6	A4368	Ainsworth	1091	17,712
7		Total Ainsworth		60,461
8				
9	A3108	Air Canada	1057	5,859
10	A3108	Air Canada	1061	2,358
11	A3108	Air Canada	1090	17,856
12	A3108	Air Canada	1108	4,948
13		Total Air Canada		31,021
14				
15	B4504	Bell Canada	1013	15,104
16	B4504	Bell Canada	1069	18,072
17	B4504	Bell Canada	1074	14,004
18	B4504	Bell Canada	1077	4,060
19		Total Bell Canada		51,240
20				
21	Grand Total			142,722

Fig. 683

This method works! It is one of those old accounting tricks (taught to me by an old accountant). It is not intuitive, especially if you hated algebra. Try it for yourself a few times, comparing the results to the method of =D19+D13+D7. You will see that you get the same result.

Gotcha: This method only works if every customer is totaled. A manager who doesn't know how to use subtotals might be the kind of manager who doesn't total the customers with only one detail line. In Fig. 684, line 9 will cause the total to not work.

	D23		$\sum$	=SUM(D2:D22)/2
	A	B	C	D
1	Acct	Customer	Invoice	Revenue
2	A4368	Ainsworth	1014	10,445
3	A4368	Ainsworth	1015	15,544
4	A4368	Ainsworth	1030	3,922
5	A4368	Ainsworth	1054	12,838
6	A4368	Ainsworth	1091	17,712
7		Total Ainsworth		60,461
8				
9	A9875	Aironet	1040	17,250
10				
11	A3108	Air Canada	1057	5,859
12	A3108	Air Canada	1061	2,358
13	A3108	Air Canada	1090	17,856
14	A3108	Air Canada	1108	4,948
15		Total Air Canada		31,021
16				
17	B4504	Bell Canada	1013	15,104
18	B4504	Bell Canada	1069	18,072
19	B4504	Bell Canada	1074	14,004
20	B4504	Bell Canada	1077	4,060
21		Total Bell Canada		51,240
22				
23	Grand Total			151,347

Fig. 684

Tip

If you work for a manager who doesn't know this trick, giving him a copy of this book would be a great idea for Boss' Day! This falls on October 16 in the USA.

Summary: =SUM()/2 is a great method for quickly determining the totals of a dataset with "manual" subtotals.

Functions Discussed: =SUM()

WHY DO SUBTOTALS COME OUT AS COUNTS?

Problem: You added automatic subtotals to this dataset. As shown in Fig. 685, the subtotals of four for Air Canada and five for Ainsworth are clearly not correct. What went wrong?

1	2	3		A	B	C	D	E
	1			Acct	Customer	Invoice	Revenue	Rep
	2		•	A3108	Air Canada	1057	5,859	Joe
	3		•	A3108	Air Canada	1061	2,358	Joe
	4		•	A3108	Air Canada	1090	17,856	Joe
	5		•	A3108	Air Canada	1108	4,948	Joe
	6		-	A3108 Count				4
	7		•	A4368	Ainsworth	1014	10,445	Mary
	8		•	A4368	Ainsworth	1015	15,544	Mary
	9		•	A4368	Ainsworth	1030	3,922	Mary
	10		•	A4368	Ainsworth	1054	12,838	Mary
	11		•	A4368	Ainsworth	1091	17,712	Mary
	12		-	A4368 Count				5

Fig. 685

Strategy: The first time that you subtotal a dataset, Excel assumes that you want to subtotal the final column in the dataset. If this column contains text data, then the subtotals dialog will default to a Count instead of a Sum, as shown in Fig. 686.

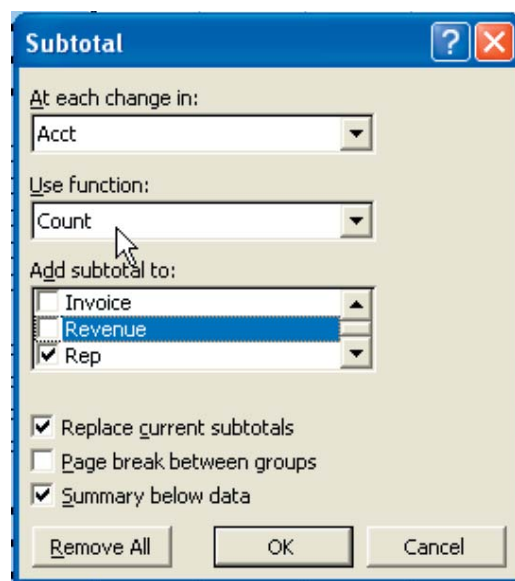


Fig. 686

Gotcha: This problem will also happen even if your final column contains mostly numbers but includes one blank cell.

To correct the problem once it appears, open the Subtotals dialog again. As shown in Fig. 687, change the Use Function dropdown from Count to Sum. Choose OK.

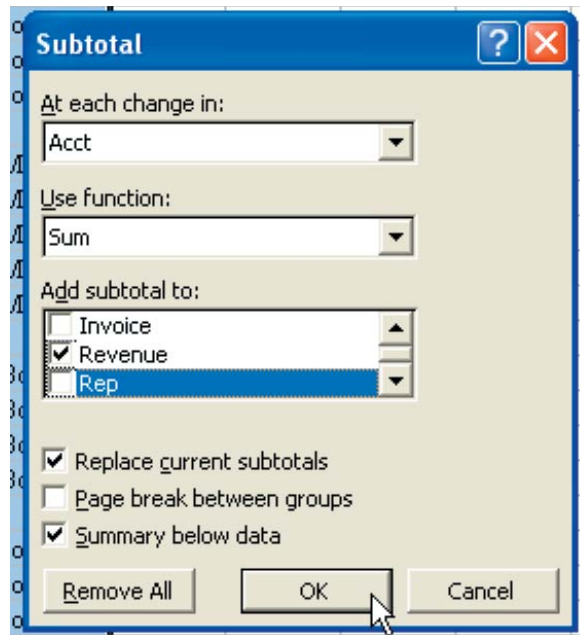


Fig. 687

To avoid the problem in the first place, remember to double-check the Use Function field in the Subtotals dialog, particularly if your data has text in the rightmost column.

Summary: Excel's intellisense often gives you the correct choices, so you may get lulled into the habit of rarely paying attention to the Use Function field in the Subtotals dialog. When you see Counts instead of Sums, you will know how to correct it.

Commands Discussed: Subtotals

SUBTOTAL MANY COLUMNS AT ONCE

Problem: As shown in Fig. 688, you have data with 12 months going across the columns. You need to add subtotals to all 12 columns.

	A	B	C	D	E	F	G	H
1	Rep	Customer	Jan	Feb	Mar	Apr	May	
2	Bob	Bell Canada	20,992	9,970	57,797	49,839	35,534	22,
3	Bob	Compton Petroleum	72,030	27,714	22,737	48,059	31,816	31,
4	Bob	Exxon	13,438	65,812	10,137	52,216	57,301	49,
5	Bob	Sears	58,901	15,112	12,576	2,960	67,967	19,
6	Bob	Texaco	4,937	56,399	42,673	8,706	18,554	64,
7	Bob	Verizon	74,173	69,724	26,459	2,303	66,832	51,
8	Joe	Air Canada	43,097	53,369	58,981	52,386	695	21,
9	Joe	Compaq	25,991	56,623	65,028	32,723	16,112	9,
10	Joe	Ford	47,662	30,635	58,536	29,054	63,375	1,
11	Joe	Sun Life Financial	42,172	43,469	30,493	17,100	39,140	42,
12	Mary	Ainsworth	6,475	15,567	56,722	59,764	16,030	30,
13	Mary	Chevron	72,587	23,640	65,507	15,028	11,530	2,
14	Mary	Sears Canada	69,013	24,207	5,525	61,329	9,321	61,
15	Mary	SBC Communications	18,244	22,914	57,609	1,887	31,241	9,
16	Mary	Shell Canada	46,756	60,476	32,342	21,848	19,619	25,

Fig. 688

Strategy: You can subtotal all of the columns at once.

- 1) In the Subtotal dialog, use the scroll bar to scroll through all fields. You can only display three fields at a time. Checkmark the last three fields, as shown in Fig. 689.

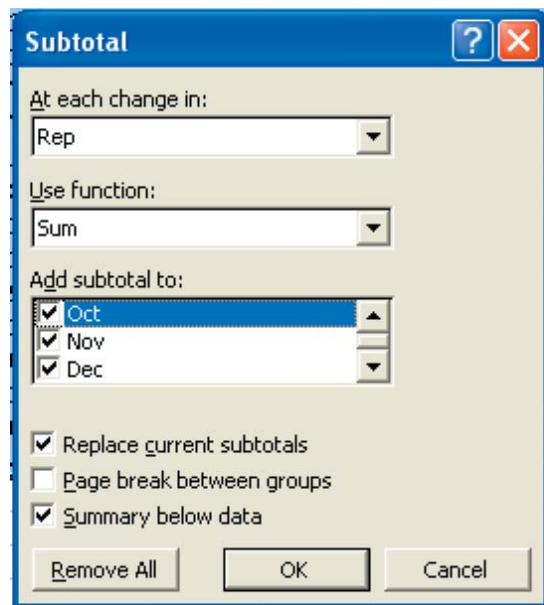


Fig. 689

- 2) Scroll up to show the previous three fields, as shown in Fig. 690.
- 3) Checkmark those three fields. Continue this routine, scrolling to reveal three fields, then checkmarking three fields. It gets particularly tedious when you have 36 months' data, but it is still infinitely faster than doing subtotals manually.

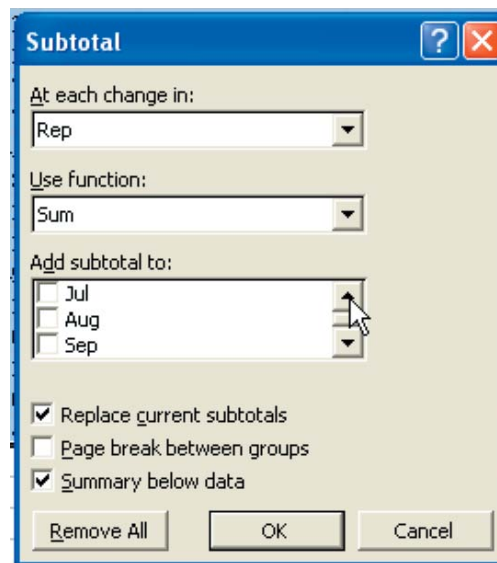


Fig. 690

Result: Subtotals are added to all of the columns at once, as shown in Fig. 691.

**Part
III**

1	2	3	A	B	C	D	E	F
	1		Rep	Customer	Jan	Feb	Mar	Apr
	2	•	Bob	Bell Canada	20,992	9,970	57,797	49,839
	3	•	Bob	Compton Petroleum	72,030	27,714	22,737	48,059
	4	•	Bob	Exxon	13,438	65,812	10,137	52,216
	5	•	Bob	Sears	58,901	15,112	12,576	2,960
	6	•	Bob	Texaco	4,937	56,399	42,673	8,706
	7	•	Bob	Verizon	74,173	69,724	26,459	2,303
	8	-	Bob Total		244,471	244,731	172,379	164,083
	9	•	Joe	Air Canada	43,097	53,369	58,981	52,386
	10	•	Joe	Compaq	25,991	56,623	65,028	32,723
	11	•	Joe	Ford	47,662	30,635	58,536	29,054
	12	•	Joe	Sun Life Financial	42,172	43,469	30,493	17,100
	13	-	Joe Total		158,922	184,096	213,038	131,263
	14	•	Mary	Ainsworth	6,475	15,567	56,722	59,764
	15	•	Mary	Chevron	72,587	23,640	65,507	15,028
	16	•	Mary	Sears Canada	69,013	24,207	5,525	61,329
	17	•	Mary	SBC Communications	18,244	22,914	57,609	1,887
	18	•	Mary	Shell Canada	46,756	60,476	32,342	21,848
	19	-	Mary Total		213,075	146,804	217,705	159,856
	20	-	Grand Total		616,468	575,631	603,122	455,202

Fig. 691

Summary: You can add subtotals to many columns in one pass of the Subtotal command. The downside is that the Excel dialog for Subtotal only lets you checkmark three fields before you have to use the scrollbar.

Commands Discussed: Subtotals