



Microsoft
Excel

Using Functions



Spreadsheets like Excel are ideal for numeric data – in many ways, they represent the most powerful computers in the world. It is possible to use spreadsheets to perform calculations and manipulate data in a variety of meaningful ways.

Formulas

Mathematical statements are equations that use values to calculate a new value. Excel allows you to easily create mathematical formulas to return results from a calculation.

To tell Excel that you are creating a formula, begin your entry in that cell with an equal sign (=). You can construct your formulas based on specified values (number) or the content of a cell (cell reference).

Excel recognized the common mathematical operators:

- + **Addition**
- **Subtraction**
- * **Multiplication**
- / **Division**

Functions

A function is a special type of formula that has already been set-up in Excel. Like a formula, these entries begin with an equal sign (=). This is followed by the function name and the cell references of the values to use in the calculation. An example of the function to calculate an average is:

=AVERAGE(A1:D7)

Pre-Made Math: Functions

1. Please open your Comp Test spreadsheet and add the following information. When you are done, save it and print your work.

	A	B	C	D
4	Test	Last Year	This Year	Change
5	Ag		52	51 =b5-c5
6	Art		59	61 Fill Down
7	Business		62	68 Fill Down
8	Cons Ed		58	61 Fill Down
9	English		56	58 Fill Down
10	History		51	53 Fill Down
11	Home Ec		58	61 Fill Down
12	Literature		55	61 Fill Down
13	Math		52	60 Fill Down
14	Music		51	51 Fill Down
15	Psych		53	58 Fill Down
16	Science		64	62 Fill Down
17	Soc Stdy		51	56 Fill Down
18	Tech		57	59 Fill Down
19	Reading		68	70 Fill Down
20	Writing		65	66 Fill Down
21	Vocab		58	61 Fill Down
22	Voc Ed		70	70 Fill Down
23		=AVERAGE(B5:B22)	=AVERAGE(C5:C22)	=SUM(D5:D22)

2. Please open your **ACE MANUFACTURING** spreadsheet and make the following changes. When you are done, save your work.

	A	B	C	D	E
2	Prices are for Shipments				
3	Directly from Warehouse				
4	Revised [today's date] 2003				
5	By: YOUR NAME				
6					
7	Product	No.	Cost	Ship	Total
8	22R354 CD 22.5	XW2	2056.68	4.85	=C8*D8
9	BBM-TYR V7	MRP1	394.59	4.66	Fill Down
10	BBM-TYR V8	MRP2	498.57	4.66	Fill Down
11	LuxLex C15	NB6	298.39	8.67	Fill Down
12	175/384 Outside Link, 009	VY8	1209.48	12.58	Fill Down
13	175/384 Inside Link, 010	VY8A	1148.59	9.78	Fill Down
14	Berrymore Adjusting Link, 2	GQ9	1148.59	4.49	Fill Down
15	Wilkins Bearing, 195	XP23	34.59	19.85	Fill Down
16	Hi-Link Adjusting Rod, MR2	HL2R2	123.54	19.85	Fill Down
17	Johnston Bar, 367	STM47	259.47	37.59	Fill Down
18	Poppit Valve, 2cm	STM002	79.59	37.59	Fill Down
19	Valve Gear, 2-8-0	VG280	2345.81	52.37	Fill Down
20	Valve Gear, 4-6-0	VG460	2589.57	52.37	Fill Down
21	Valve Gear, 2-8-2	VG282	2739.81	57.16	Fill Down
22	Valve Gear, 4-6-2	VG462	2994.21	57.16	Fill Down
23	Total				=SUM(E8:E22)

3. Please open your **JACKSON MANUFACTURING** spreadsheet and make the following changes. Save your work.

	A	B	C	D	E
1	Jackson International, Inc.				
2	Computer Purchase Summary				
3	First Quarter 2003				
4	By: YOUR NAME				
5					
6	Branch	Description	Qty.	Cost	Total
7	Willow Run, MI	SevR-112A	25	3834.55	=C7*D7
8	Jacksonville, FL	Comp 185-X	15	3485.68	Fill Down
9	Hendersonville, CO	Mint1Z387	34	4955.49	Fill Down
10	West Chicago Heights, IL	SevR-112A	25	1894.59	Fill Down
11	East Dilworth, MN	SevR-112A	36	2345.48	Fill Down
12	Birmingham, AL	Comp 185-X	34	5543.49	Fill Down
13	Houston, TX	Discomp-948	22	3384.59	Fill Down
14	Kenton, WA	Mint1Z387	12	1934.5	Fill Down
15	Mountainville, WI	Comp185-X	3	3994.95	Fill Down
16	Laurel, MT	Discomp-948	23	3833.49	Fill Down
17	Boston, MA	Mint1Z387	12	2685.19	Fill Down
18	Hanover, CT	Comp 185-X	10	4698.29	Fill Down
19	Fontana, CA	Discomp-948	7	2956.19	Fill Down
20	Total		=SUM(C7:C19)	=SUM(D7:D19)	=SUM(E7:E19)

4. Please create the following spreadsheet for **MILWAUKEE MEATS**. When you are done, save your work.

	A	B	C	D
1	Milwaukee Meat Company			
2	Inventory [today's date]			
3	By: YOUR NAME			
4				
5	Item	Pounds	Cost	Total
6	Hamburger	35	0.89	=B6*C6
7	Ground Sirloin	17	1.09	Fill Down
8	Ground Round	22	0.99	Fill Down
9	Chicken Breasts	41	0.79	Fill Down
10	Cut Up Fryers	21	0.59	Fill Down
11	Hot Dogs	57	0.49	Fill Down
12	Bratwurst	31	0.99	Fill Down
13	Pepperoni	73	1.59	Fill Down
14	Italian Sausage	81	1.39	Fill Down
15	Sirloin Steak	52	2.29	Fill Down
16	T-Bone Steak	74	3.39	Fill Down
17	New York Strip	57	3.29	Fill Down
18	Rib Steak	41	3.79	Fill Down
19	Prime Rib	47	4.59	Fill Down
20	Inventory Totals	=SUM(B6:B19)	Fill Right	Fill Right