

Microsoft Excel 2007

Lesson 4: Functions

Open the file “Example.xlsx” if it is not already open.

Suppose that you would like to display the highest and lowest totals from the four days. You also would like the average of the totals for the four days.

Enter the word “Highest:”, “Lowest:”, and “Average:” in cells A17 through A19.

Change the font of the three words to Arial 14.

Example Worksheet 1					
Register					
Day	1	2	3	4	Daily Total
Monday	\$ 2,032	\$ 1,227	\$ 2,143	\$ 566	\$ 5,968
Tuesday	\$ 1,785	\$ 1,567	\$ 2,271	\$ 803	\$ 6,426
Wednesday	\$ 2,237	\$ 1,454	\$ 1,983	\$ 965	\$ 6,639
Thursday	\$ 2,876	\$ 1,981	\$ 3,249	\$ 327	\$ 8,433
Friday	\$ 2,118	\$ 1,527	\$ 2,671	\$ 543	\$ 6,859
Saturday	\$ 3,873	\$ 2,173	\$ 4,371	\$ 699	\$ 11,116
Sunday	\$ 877	\$ 425	\$ 1,655	\$ 158	\$ 3,115
Register Total	\$ 15,798	\$ 10,354	\$ 18,343	\$ 4,061	\$ 48,556
Percent	32.5%	21.3%	37.8%	8.4%	100.0%
Highest:					
Lowest:					
Average:					

Excel has several built-in **functions** that make common calculations easy. We already have used one of these functions: =SUM ().

Functions often have the form =FUNCT(cell1:cell2), where the **arguments** of the function (cell1 and cell 2) are the ends of a range of cells. As an example, the function =SUM(B7:E7) calculates the sum of the quantities in the cells B7, C7, D7, and E7.

Notice that the formula for a function always begins with an equal sign.

If you type the formula of a function into a cell the equal sign must be the first character.

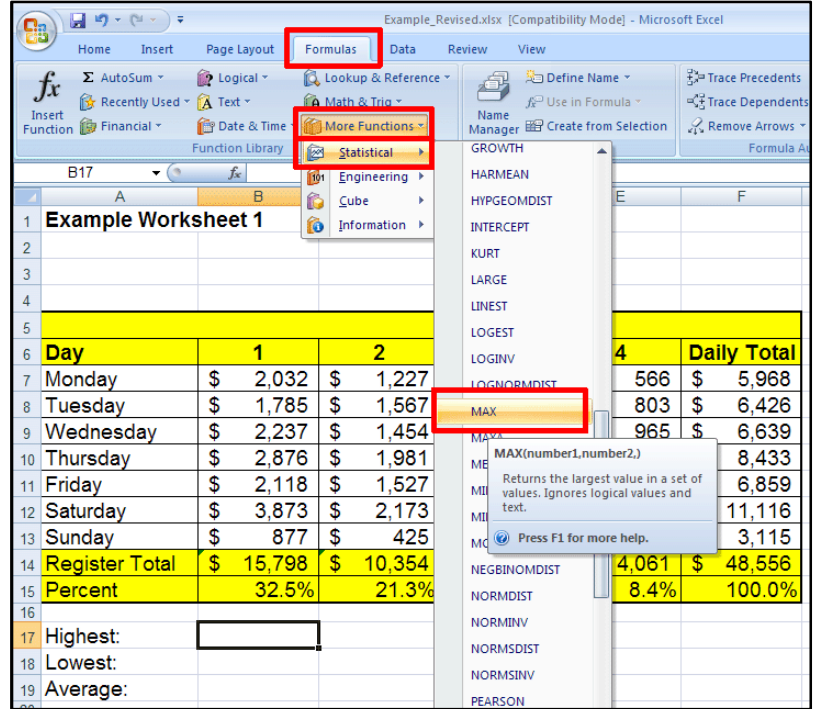
In this lesson we will learn about three commonly used statistical functions: MAX, MIN, and AVERAGE. The purpose of these functions is evident from their titles.

Statistical Functions

Place the cursor on cell **B17** and select the **Formulas** ribbon.

In this ribbon, click on **More Functions**.

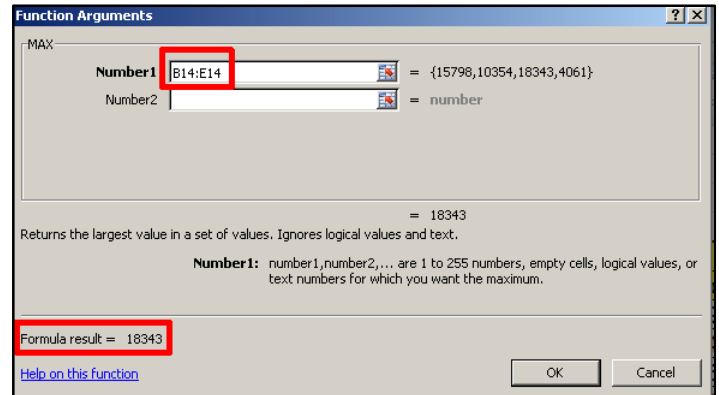
Then select **Statistical** and **MAX**.



Now we need to specify the **arguments** of the function. In our example we want to display the maximum value in the cells between B14 and E14.

Enter **B14:E14** in the Number1 text box.

The value of the function with these arguments is displayed beside the phrase "Formula result =".



Click on **OK**. You should see the highest value, 18343, displayed in cell B17 where you had placed the cursor.

Place the cursor in cell **B18** and insert the **MIN** function there. Again find the minimum value in the range **B14:E14**.

Finally, do the same to calculate the **average** of the four totals.

Set the font of the three numbers in cells B17 through B19 to Arial 14.

Register					
Day	1	2	3	4	Daily Total
Monday	\$ 2,032	\$ 1,227	\$ 2,143	\$ 566	\$ 5,968
Tuesday	\$ 1,785	\$ 1,567	\$ 2,271	\$ 803	\$ 6,426
Wednesday	\$ 2,237	\$ 1,454	\$ 1,983	\$ 965	\$ 6,639
Thursday	\$ 2,876	\$ 1,981	\$ 3,249	\$ 327	\$ 8,433
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Sunday	\$ 877	\$ 425	\$ 1,655	\$ 158	\$ 3,115
Register Total	\$ 15,798	\$ 10,354	\$ 18,343	\$ 4,061	\$ 48,556
Percent	32.5%	21.3%	37.8%	8.4%	100.0%
Highest:	\$ 18,343				
Lowest:	\$ 4,061				
Average:	\$ 12,139				

Date and Time Functions and Format

It often is convenient to include a function on a worksheet that shows the current date, so that you will be able to tell when a hard copy of the worksheet was printed out.

Enter the function **=now()** in cell E1.

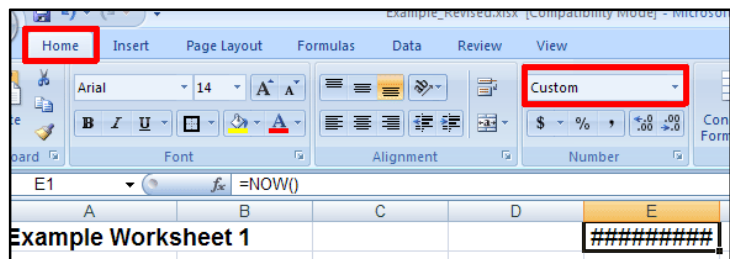
Example Worksheet 1					
1					=now()
2					

Make sure that the equal sign is the first character in the cell.

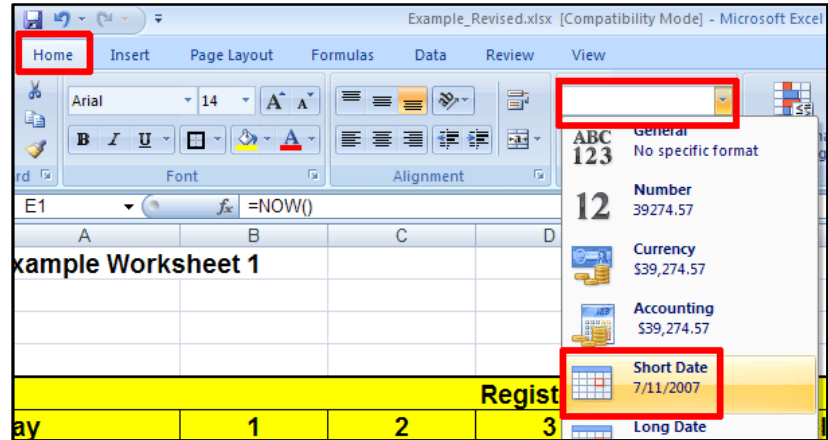
You probably will see ##### in the cell, which is a sign that the cell is not wide enough to display its contents. In the case of the NOW() function, this is a sign that we need to change the date and time format.

Click on cell E1 to select it and display the **Home** ribbon.

Click on the arrow at the left of the **Format** box in the **Number** section to display format options.



Select the **Short Date** format.



When you are finished, the worksheet should look something like the one at the right.

	A	B	C	D	E	F
1	Example Worksheet 1				7/11/2007	
2						
3						
4						
5	Register					
6	Day	1	2	3	4	Daily Total
7	Monday	\$ 2,032	\$ 1,227	\$ 2,143	\$ 566	\$ 5,968
8	Tuesday	\$ 1,785	\$ 1,567	\$ 2,271	\$ 803	\$ 6,426
9	Wednesday	\$ 2,237	\$ 1,454	\$ 1,983	\$ 965	\$ 6,639
10	Thursday	\$ 2,876	\$ 1,981	\$ 3,249	\$ 327	\$ 8,433
11	Friday	\$ 2,118	\$ 1,527	\$ 2,671	\$ 543	\$ 6,859
12	Saturday	\$ 3,873	\$ 2,173	\$ 4,371	\$ 699	\$ 11,116
13	Sunday	\$ 877	\$ 425	\$ 1,655	\$ 158	\$ 3,115
14	Register Total	\$ 15,798	\$ 10,354	\$ 18,343	\$ 4,061	\$ 48,556
15	Percent	32.5%	21.3%	37.8%	8.4%	100.0%
16						
17	Highest:	\$ 18,343				
18	Lowest:	\$ 4,061				
19	Average:	\$ 12,139				
20						

Save the worksheet.