

# Excel Basics Practice

This file provides hands-on exercises to accompany the document named "A Review of Excel"

## Naming Ranges

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<a href="#">Exercise 3</a>	Name a Range (method 3)	<a href="#">Exercise 4</a>	Display Range Names
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## Basic Editing

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## Formulas

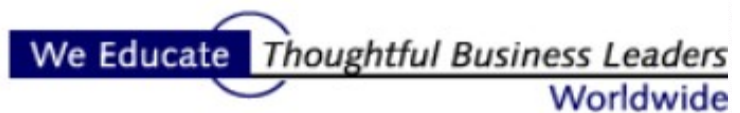
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## Data Tables

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## Charting

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Basics".

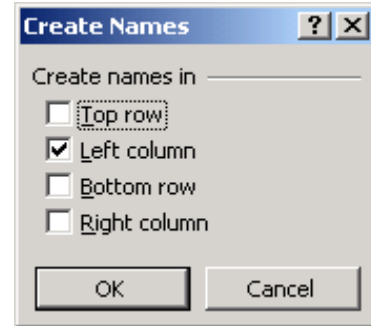
## Practice: Naming Ranges

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### Exercise 1-Name a range

January 30  
February 45  
March 22  
April 18  
May 10  
June 58

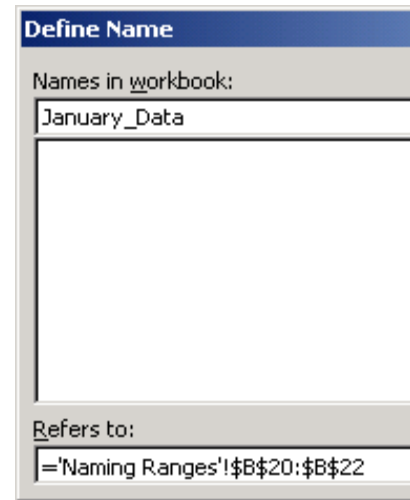
1. Select range B6:C11.
2. From Excel's menus choose *Insert, Name, Create*.
3. In the "Create Names" dialog, click "Left column" and then "OK".



### Exercise 2-Name a range

January Data  
35  
44  
66

1. Select range B20:B22.
2. From Excel's menus choose *Insert, Name, Define*.
3. In the "Define Name" dialog, supply a name for the selected range or if Excel has provided a name accept its suggestion.
4. Click "OK".



### Exercise 3-Name a range



1. Select range B37:C39.
2. Click in the "Name Box" at the left of Excel's formula bar.
3. In the "Name Box" type the text Aqua\_Range and hit the enter key.



Range name text typed into the "N" at the left of Excel's formula

### Exercise 4-Display range names

1. Display the range names you've assigned by clicking the drop-down arrow in the "Name Box"

	A	B	C
1	<b>Range Name</b>	<b>Referenced Range</b>	
2	_3434	=Sheet1!\$D\$5	
3	_A	=Sheet1!\$E\$10	
4	OK1	=Sheet1!\$E\$6	
5	SalesTax	=Sheet1!\$A\$1	
6	This.is.a.range	=Sheet1!\$B\$5:\$B\$9	

- Box .
2. Document in the worksheet the range names you've assigned by clicking a cell in a blank area of the worksheet and choosing the commands *Insert, Name, Paste, Paste List*.

	A	B	C
1	<b>Range Name</b>	<b>Referenced Range</b>	
2	_3434	=Sheet1!\$D\$5	
3	_A	=Sheet1!\$E\$10	
4	OK1	=Sheet1!\$E\$6	
5	SalesTax	=Sheet1!\$A\$1	
6	This.is.a.range	=Sheet1!\$B\$5:\$B\$9	

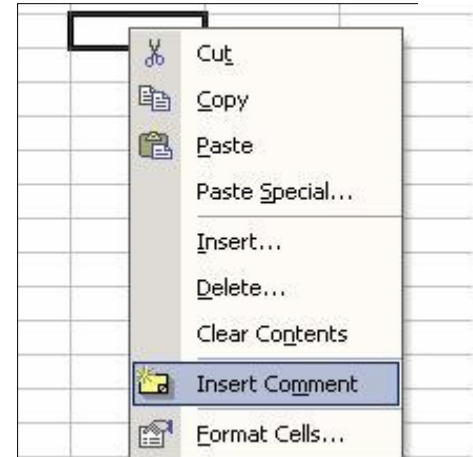
An example of "paste listed" range r

### Exercise 5-Add a cell comment

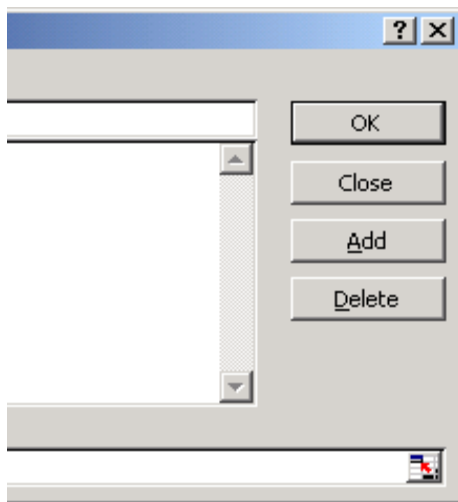
100%

1. Hover the mouse pointer over the red triangle in the cell above to see the associated comment.
2. Enter a value in an empty cell\*. With that cell selected, choose *Insert, Comment* from Excel's menus. -Or-right click the cell and choose *Insert Comment* from the pop-up menu that displays.
3. Enter your comment in the text box provided.

\* You can also add a comment to an empty cell.



Excel makes its best guess as to where your labels are in relation to your data. You may have more than one option selected. For example, "Top row" AND "Left column".

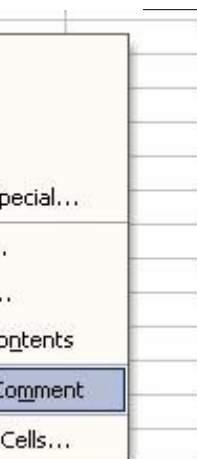


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bar.

B	C
<b>Referenced Range</b>	
Sheet1!\$D\$5	
Sheet1!\$E\$10	
Sheet1!\$E\$6	
Sheet1!\$A\$1	
Sheet1!\$B\$5:\$B\$9	

B	C
<b><u>Referenced Range</u></b>	
Sheet1!\$D\$5	
Sheet1!\$E\$10	
Sheet1!\$E\$6	
Sheet1!\$A\$1	
Sheet1!\$B\$5:\$B\$9	

names.



## Practice: Formatting

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### Exercise 6-Merge and Center

#### Tensile Strength of Cement\*

1	13	13.3	11.8		
2	21.9	24.5	24.7		
3	29.8	28	24.1	24.2	26.2
7	32.4	30.4	34.5	33.1	35.7
28	41.8	42.6	40.3	35.7	37.3

\* From <http://www.stat.ncsu.edu/sas/sicl/data>

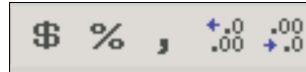
1. Select range B6:G6.
2. From Excel's formatting click the "Merge and Center" tool.



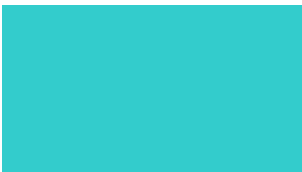
### Exercise 7-Apply Formatting

100    Currency  
100    Percentage  
1000000    Thousands comma separator  
100.00    Increase decimals  
100.00    Decrease decimals

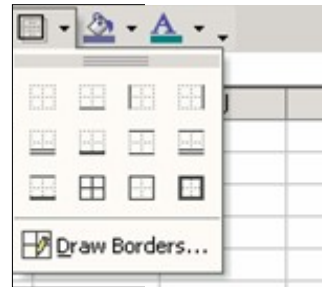
Select each of the five cells in turn in the range B18 to B22. Format the cell by clicking the appropriate formatting tool button from the Formatting toolbar.



### Exercise 8-Apply Borders



Select the range of colored cells at left and use a border tool on the formatting toolbar to add a thick border around the outside. Your bordered range should look like this:



### Exercise 9-Create a Text Box

Click the Text Box tool on the Drawing toolbar. Drag a rectangular shape at left, and enter text into the box. To add special formatting, right-click an *edge* of the text box and choose "Format Text Box".





### Exercise 10-Use the Format Painter

	Sales
<b>January</b>	\$5,400.00
<b>February</b>	\$3,152.00
<b>March</b>	\$6,582.00

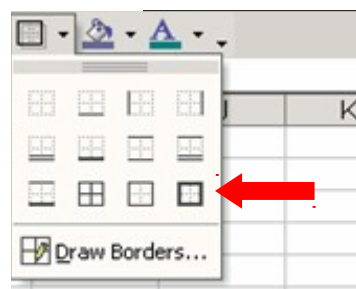
	Sales
January	\$5,400.00
February	\$3,152.00
March	\$6,582.00

Use the Format Painter button on Excel's Standard Toolbar to quickly format the range B63:C66 in the same way as the range formatted at left.





toolbar  
nter"





## Practice: Basic Editing

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### Exercise 11-Edit Fill

5	March	Qtr 1
10	April	Qtr 2

1. Select range B7:B8 at left.
2. Position the pointer on the "fill box", the small black square in the lower right corner of the selected range.

5	March	Qtr 1
10	April	Qtr 2

3. Drag the fill box down so Excel continues the sequence of numbers.

Do the same for C7:C8 and D7:D8.

### Exercise 12-Use Excel Custom Lists

January	Sunday
---------	--------

1. Select Cell B25 at left.
2. Position the pointer on the "fill box", the small black square in the lower right corner of the selected range.
3. Drag down several rows. Excel will fill the cells with months of the year. Follow the same process for Cell C25.

January
February
March
April
May
June
July
August

### Exercise 13-Copy & Paste a Formula

Referenced value: 6%  
Another referenced value: 100  
Formula: 6

#### Method 1

1. Make D47 the current cell.
2. In the formula bar, drag over the formula, and hit CTRL+C (*Edit, Copy*), then hit the escape key.
3. Click in cell B49 and hit CTRL+V (*Edit, Paste*). The same result (6) should display. *Excel does not adjust the cell references in the formula.*



### Method 2

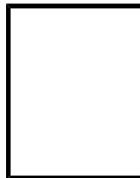
1. Again make D47 the current cell and click CTRL+C.
2. Click in Cell B51 and hit CTRL+V. A different result (0) should display. *Excel adjusts the cell references in the copied formula.*

## Exercise 14-Edit Copy & Edit Paste Special to Convert Formulas to Values

### Formulas

46  
54  
143  
100  
14

### Values



1. Click each of the cells B65 to B69 at left and see in the formula bar that each is a formula.
2. Select the range B65:B69.
3. From the menus choose *Edit, Copy*.
4. Click Cell D65 and choose *Edit, Paste Special*.
5. In the "Paste Special" dialog, toggle on the "Values" option and click OK.

The numbers in the range D65:D69 should appear the same as the numbers in the range B65:B69. However, click each value in the D column and see in the formula bar that each has been transformed from a formula to a constant.

## Exercise 15-Edit Copy & Edit Paste Special to Transpose Data

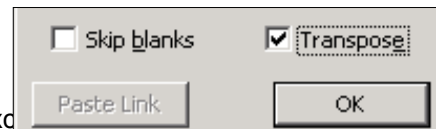
### Data in Rows

January	55	35
February	23	29
March	12	18

### Transposed Data



1. Highlight the range B85:D87 at left.
2. From Excel's menus choose *Edit, Copy*.
3. Click Cell B90.
4. From Excel's menus choose *Edit, Paste Special* to open the "Paste Special" dialog.
5. Click the "Transpose" option near the bottom of the dialog; then click OK.



Transposed Data		
January	February	March
55	23	12
35	29	18

**Transposed Data**

January	February	March
55	23	12
35	29	18

1  
2

1

2

3

└



## Practice: Formulas

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### Exercise 16-Copying a Formula Using a Relative Reference

	Quarter 1	Quarter 2	Quarter 3
March	\$500	\$250	\$35
April	\$300	\$120	\$45
May	\$100	\$95	\$55
Total:	\$ 900.00		

1. Check to see that the cell C11 at left holds the SUM formula =SUM(C8:C10).
2. Make cell C11 the current cell.
3. Position the mouse pointer on the black square at the lower right-hand corner of cell C11 and drag the pointer across to cell E11. The result should look like this:

	C	D	E
4. E 11	\$ 900.00	\$ 465.00	\$ 135.00

4. E 11 and E11. Excel has *adjusted the cell references* so they refer to the correct values in their columns. The =SUM(C8:C10) becomes =SUM(D8:D10) and =SUM(E8:E10).

### Exercise 17-Copying a Formula Using an Absolute Reference

Tax rate: 4%

	Quarter 1	Quarter 2	Quarter 3
March	\$500	\$250	\$35
April	\$300	\$120	\$45
May	\$100	\$95	\$55
Tax:	\$36		

Example

	Quarter 1	Quarter 2	Quarter 3
March	\$500	\$250	\$35
April	\$300	\$120	\$45
May	\$100	\$95	\$55
Tax:	\$36	\$19	\$5

1. Check to see that the cell C35 at left holds the formula =SUM(C32:C34).
2. Make cell C35 the current cell.
3. Position the mouse pointer on the black square at the lower right-hand corner of cell C35 and drag the pointer across to cell E35. The result should look like this:

	B	C	D
35	Tax:	\$36	\$0

4. Modify the "master formula" in Cell C35 so it looks like this:  
=SUM(C32:C34)\*\$C\$29  
and then copy the modified formula across for Quarters 2 and 3 to get correct results.

Check the completed example (with green background) to see another instance.

### Exercise 18-Use Built-in Functions

	Sales
May	\$ 235
June	\$ 544
July	\$ 829
August	\$ 610

Sum:  
Average:  
Min:  
Max:

Today's date:

1. Write a function in each of Cells C6 at left to calculate the sum, average, minimum value, and maximum value of the range C59:C62 (named SALES). Your result should look like this:

<b>Sum:</b>	\$ 2,218
<b>Average:</b>	\$ 554.50
<b>Min:</b>	\$ 235
<b>Max:</b>	\$ 829

2. Enter the TODAY function in Cell C return the current date. The syntax of the function is: =TODAY()

### Exercise 19-Using Excel Logical Functions

	Sales (\$ millions)
Quarter 1	500
Quarter 2	350
Quarter 3	495
Quarter 4	620

Which did better?

Met \$600M Q goal?

Q1 vs. Q2:

1. Write an IF function in Cell C82 that compares the sales in Quarters 1 and 2 and returns the text "Q1 better than Q2" if Q1 sales are greater and "Q2 better than Q1" if Q2 sales are greater. Your formula should look like this:  
=IF(C77>C78, "Q1 better than Q2", "Q2 better than Q1.")
2. Write an IF statement in Cell C84 that includes a nested MAX function and returns the text "Exceeded \$600M in one quarter" if any quarter meets the criteria or "Quota not met" if not. Your formula should look like this:  
=IF(MAX(C77:C80)>600, "Exceeded \$600M sales in 1 quarter", "Quota not met")
3. Write an IF statement in Cell C86 that compares sales in Q1 and Q2. If Q2 sales are greater, return the difference. If Q1 sales are less, return the increase. Your formula should look like this:  
=IF(C77>C78, C77-C78, C78-C77)

### Exercise 20-Using Excel's Formula Auditing Tools

<b>Tax rate:</b>	6%
<b>Sale:</b>	100
<b>Tax:</b>	6
<b>Total:</b>	106

1. Turn on Excel's "Formula Auditing" toolbar by choosing *View, Toolbars, Formula Auditing* from Excel's menu.
2. Click Cell C105 and click the "Trace Precedents" button on the toolbar to the values used by the C105 formula
3. Click Cell C101 and click the "Trace Dependents" button on the toolbar to the formula values that depend on the rate value in C101.
4. Click the "Remove All Arrows" button on the toolbar to remove auditing indic

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### Tip-Building a Formula with Absolute Addressing

An absolute reference is indicated by the dollar signs before the row and column indicators; e.g., \$C\$29. An alternative to typing in the dollar signs is to

1. Position the mouse pointer on the cell reference in the formula bar.
2. Tap the F4 key until the type of reference you want is displayed.

The F4 key toggles through four options:

- C29 - relative
- \$C\$29 - absolute row and column
- \$C29 - absolute column, relative row
- C\$29 - absolute row, relative column

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## Practice: Data Tables

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### The model

Interest Rate	5%	} Input values that can vary.
Term	30	
Principal	\$250,000	
Monthly Payment	(\$1,342.05)	=PMT(interest rate/12, term * 12, princip

### Exercise 21-The One-Input Data Table

1. Complete the one-input Data Table that varies interest rate by highlighting the range B22 choosing *Data, Table* from Excel's menus, and entering the model interest rate cell (D6) the "Column" prompt. Hit OK.
2. Complete the one-input Data Tables below that vary term and principal in the same fash

#### Vary Interest Input

Interest	(\$1,342.05)
3.5%	
4.0%	
4.5%	
5.0%	
5.5%	
6.0%	
6.5%	

#### Vary Term Input

Term	(\$1,342.05)
5	
10	
15	
20	
25	
30	
35	

#### Vary Principal

Principal	
\$100,000	
\$150,000	
\$200,000	
\$250,000	
\$300,000	
\$350,000	
\$400,000	

### Exercise 22-The Two-Input Data Table

Complete the two-input Data Table that varies both interest rate and term by highlighting the range B43:H50, choosing *Data, Table* from Excel's menus, entering the model interest rate cell (D6) in the "Column" prompt, and entering the model term (D7) in the "Row" prompt. Hit OK to complete execution.

(\$1,342.05)	5	10	15	20	25	30
3.5%						
4.0%						
4.5%						
5.0%						
5.5%						
6.0%						
6.5%						

cal)

2:C29,  
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**Input**  
(\$1,342.05)



## Practice: Charting

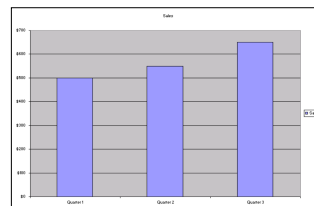
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### Exercise 23-Generate a Quick Chart

	Sales
Quarter 1	\$500
Quarter 2	\$550
Quarter 3	\$650

1. Select the range B7:C10 at left.
2. Hit the F11 key.

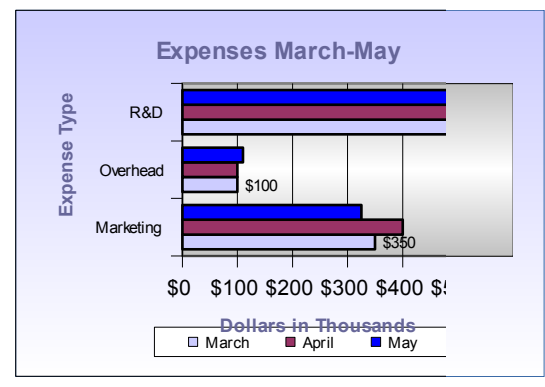
Excel generates a default column chart on a new worksheet it adds to the workbook. Your column chart should look like this:



### Exercise 24-Use the Chart Wizard to Create a Chart

	March	April	May
Marketing	\$350	\$400	\$325
Overhead	\$100	\$100	\$110
R&D	\$500	\$550	\$525

1. Select the range B24:E27 at left.
2. Click the Chart Wizard button on E Standard toolbar and walk through four Wizard steps. Generate a bar that looks something like the one below.

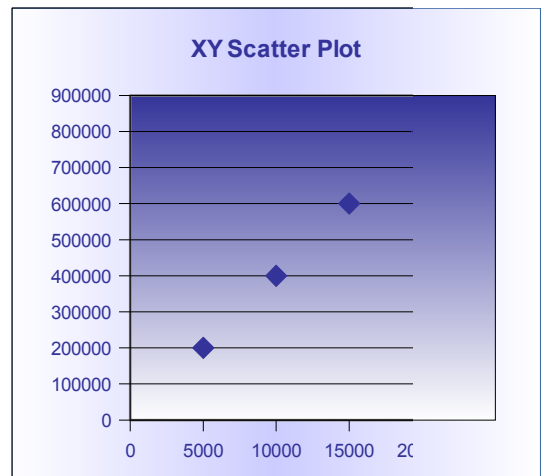


### Exercise 25-Create a Scatter Plot (XY Chart)

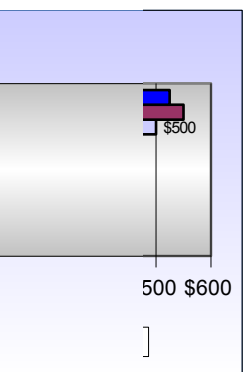
X	5000	10000	15000	20000
Y	200000	400000	600000	800000

1. Select the range B46:F47 above.
2. Click the Chart Wizard button on Standard toolbar and start the Chart Wizard. Choose the "XY (Scatter)" type.
3. Complete the Chart Wizard steps. The resulting scatter plot should look something like this:

scatter plot should look something like the one below.



Excel's  
the  
chart



Excel's  
art  
" chart

3. Your  
is like the

Figure 1

