Excel Basics Practice

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

Naming Ranges

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Basics".

Practice: Naming Ranges

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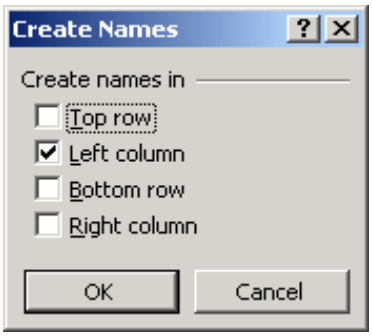
Exercise 1-Name a range

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

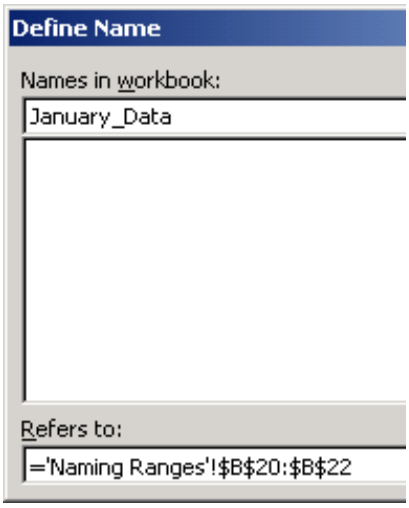
1. Select range B6:C11.
2. From Excel's menus choose *Insert, Name, Create*.
3. In the "Create Names" dialog, click "Left column" and then "OK".



Exercise 2-Name a range

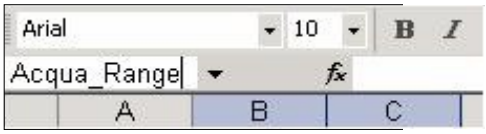
January Data
35
44
66

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	**Range Name**	**Referenced Range**	
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	

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	**Range Name**	**Referenced Range**	
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	

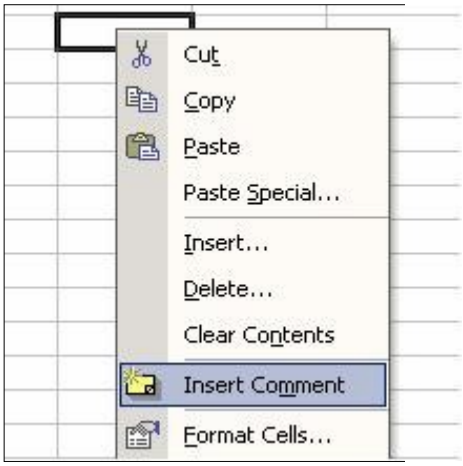
An example of "paste listed" range r

Exercise 5-Add a cell comment

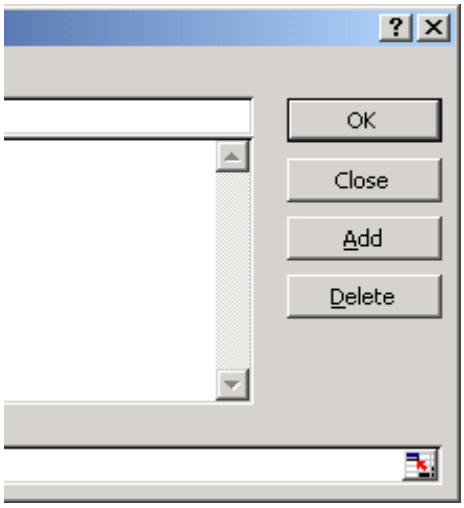
100%

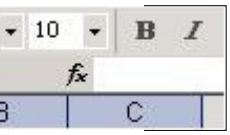
1. Hover the mouse pointer over the red triangle in the cell above to see the associated comment.
2. Enter a value in an empty cell*. With that cell selected, choose *Insert, Comment* from Excel's menus. -*Or*-right click the cell and choose *Insert Comment* from the pop-up menu that displays.
3. Enter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



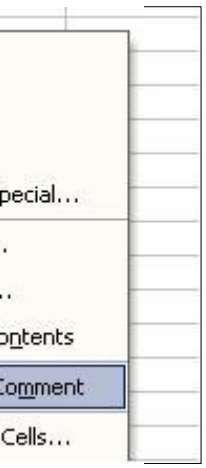


ame Box"
bar.

B	C
eferenced Range	
Sheet1!$D$5	
Sheet1!$E$10	
Sheet1!$E$6	
Sheet1!$A$1	
Sheet1!$B$5:$B$9	

B	C
eferenced Range	
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 to
   click the "Merge and Cent
   tool.

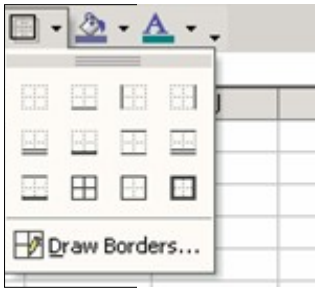
Exercise 7-Apply Formatting

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

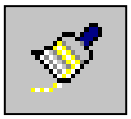
Click the Text Box tool on the Drawing toolbar. Drag a rectangular shape at left, and enter text into the box. To add special formatting, right-click an *edge* of the text box and choose "Format Text Box".

Exercise 10-Use the Format Painter

	Sales
January	$5,400.00
February	$3,152.00
March	$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.



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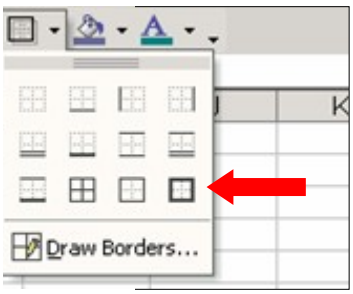

Practice: Basic Editing

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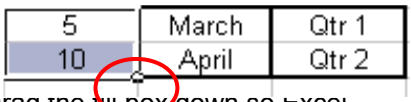
Exercise 11-Edit Fill

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.



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

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	**Values**

1. Click each of the cells B65 to B69 at left

46	
54	
143	
100	
14	

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

Excel converts columns to rows.

Transposed Data		
January	February	March
55	23	12
35	29	18

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 O

Exercise No. 1

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, principal)

Exercise 21-The One-Input Data Table

1. Complete the one-input Data Table that varies interest rate by highlighting the range B22:C29, choosing *Data, Table* from Excel's menus, and entering the model interest rate cell (D6) in the "Column" prompt. Hit OK.
2. Complete the one-input Data Tables below that vary term and principal in the same fashion.

Vary Interest Input

Interest	($1,342.05)
3.5%	
4.0%	
4.5%	
5.0%	
5.5%	
6.0%	
7.5%	

Vary Term Input

Term	($1,342.05)
2	
4	
6	
7	
25	
10	
9	

Vary Principal Input

Principal	($1,342.05)
$500,000	
$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%						

Practice: Formulas

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Activity # 2

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		

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

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 filled 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:

4. Examine the copied formulas in cells D11 and E11. Excel has *adjusted the cell references* so they refer to the correct values in their columns. That is, =SUM(**C**8:**C**10) becomes =SUM(**D**8:**D**10) and =SUM(**E**8:**E**10).

	C	D	E
11	$ 900.00	$ 465.00	$ 135.00

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

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

1. Check to see that the cell C35 at left holds the formula =SUM(C32:C34)*C29.
2. Make cell C35 the current cell.
3. Position the mouse pointer on the filled black square at the lower right-hand corner of cell C11 and drag the pointer across to cell E35. The result should look like this:

The formulas in Cells D35 and E35 are incorrect as copied. Excel has used its default relative referencing in the copied formulas but that's not appropriate for the reference to the tax rate in Cell C29.

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 the correct results.

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

Use 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 C64:C67 at left to calculate the sum, average, minimum value, and maximum value in the range C59:C62 (named SALES). Your result should look like this:

Sum:	$ 2,218
Average:	$ 554.50
Min:	$ 235
Max:	$ 829

2. Enter the TODAY function in Cell C69 to return the current date. The syntax of the function is: =TODAY()

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 2" or "Q2 better than Q1". 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 that returns the text "Exceeded $600M sales in one quarter" if any quarter meets that 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 86 that compares sales in Q1 and Q2. If Q1 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

Tax rate:	6%
Sale:	100
Tax:	6
Total:	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 s 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 the toolbar to remove auditing indicat

ee

see
tax

on
ors.

Exercise No.2

October 10, 2018

Practice: Charting

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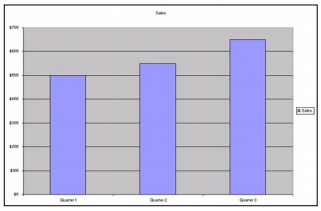
Exercise 23-Generate a Quick Chart

	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:

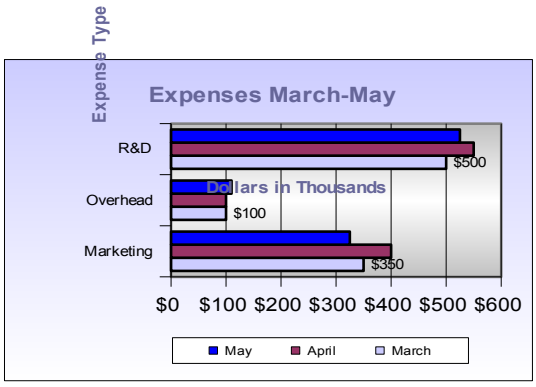


Exercise 24-Use the Chart Wizard to Create a Chart

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

1. Select the range B46:F47above.
2. Click the Chart Wizard button on Excel's Standard toolbar and start the Chart Wizard. Choose the "XY (Scatter)" chart type.
3. Complete the Chart Wizard steps. Your scatter plot should look something like the one below.

1. Select the range B24:E27 at left.
2. Click the Chart Wizard button on Excel's Standard toolbar and walk through the four Wizard steps. Generate a bar chart 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