Exercises

Exercise 1 — Activity, Schedule

A worksheet can be used to manage a school and extra-curricular activities schedule.

a) Create a new workbook.

b) Enter the data and apply formatting using the Office theme as shown below. Modify the time intervals in row B to be appropriate for your schedule:

	A	B	C	D	E	F
1	**Name's Weekly Schedule**					
2	TIME	Monday	Tuesday	Wednesday	Thursday	Friday
3	9:00 - 10:00					
4	10:00 - 11:00					
5	11:00 - 12:00					
6	12:00 - 1:00					
7	1:00 - 2:00					
8	2:00 - 3:00					
9	3:00 - 4:00					
10	4:00 - 5:00					
11	5:00 - 6:00					
12	6:00 - 7:00					
13	7:00 - 8:00					
14						

c) Starting in row 3, fill in the schedule by adding data such as school classes, athletics, extracurricular groups and clubs, studying and doing homework, and so forth.

d) Add your name in a header and the current date in a footer. Add gridlines and headings.

e) Save the workbook naming it Schedule and print a copy.

f) Create a new workbook. Enter the data and apply formatting as shown below:

	A	B	C	D	E	F	G
1	Activity	Mon	Tue	Wed	Thu	Fri	Total Hours
2							
3							
4							
5							

g) Using the Schedule printout as a reference, fill in all the scheduled activities in column A and the corresponding hours per day in columns B through F.

h) In column G, enter formulas that calculate the total hours spent on each activity per each work week. Format the total hours to display 2 decimal places.

i) Add your name in a header and the current date in a footer. Add gridlines and headings.

j) Save the workbook naming it Activity and print a copy.

k) Discuss your schedule with a parent, adult, or a peer. Analyze if you are organizing your time efficiently or are over-extending yourself.

Exercise 2 — Balance Sheet

A company uses a balance sheet to list assets (what they own), liabilities (what they owe), and stockholder's equity (total assets minus total liabilities) as of a specific date.

a) Create a new workbook.

b) Enter the data and apply formatting using the Office theme as shown below. Add the NLG LOGO, which is a data file for this text:

	A	B	C	D
1		**Northern Lights Gym**		
2				
3				
4	**Balance Sheet for 2009**			
5				
6	**Assets:**			
7		Cash	$12,000	
8		Accounts Receivable	$15,000	
9		Gym Equipment	$45,000	
10		Office Computers	$98,990	
11		**Total Assets:**		
12				
13	**Liabilities:**			
14		Accounts Payable	$75,987	
15		Short-term Debt	$1,200	
16		**Total Liabilities:**		
17				
18				
19		**Total Stockholder's Equity:**		

c) Modify the logo by adding a picture style and recoloring the logo.

d) Save the workbook naming it Balance Sheet.

e) In cell C11, enter a formula that uses cell references to calculate the total assets.

f) In cell C16, enter a formula that uses cell references to calculate the total liabilities.

g) In cell C19, enter a formula that uses cell references to calculate the stockholder's equity.

h) Format cells C11, C16, and C19 in an appropriate cell style with a bottom double border.

i) Add your name in a header and the current date in a footer. Add gridlines and headings.

j) Save the modified Balance Sheet and print a copy.

k) Create an HTML document from the workbook with the title Northern Lights Gym Finances. When saving as a Web page, select Single File Web Page from the Save as type list in the Save As dialog box. This option will save the logo as well as the data in one Web page.

l) Preview the HTML file in a Web browser.

Exercise 3 — Temp Conversion

The local university's Meteorology department wants to use a worksheet to convert Fahrenheit temperatures to the equivalent Celsius temperatures.

a) Create a new workbook.

b) Enter the data and apply formatting using the Office theme as shown below. In cell E3 enter the formula =5/9*(B3–32) to convert the Fahrenheit temperature stored in cell B3 to degrees Celsius:

	A	B	C	D	E
1	**Temperature Conversion**				
2					
3	Fahrenheit Temp:	80		Celsius Temp:	27
4					

c) Save the workbook naming it Temp Conversion.

d) Format cell E3 to display 0 decimal places.

e) Apply conditional formatting to cells B3 and E3 so that negative values will be displayed in a red text color.

f) Enter the following Fahrenheit temperatures in cell B3, one at a time: 0, 32, and 80. What Celsius temperature does each of these convert to?

g) In row 5, have the worksheet convert temperatures from a Celsius temperature entered in cell B5 to a Fahrenheit temperature displayed in cell E5. Use 26 for the Celsius temperature. Include appropriate labels. The formula needed for converting from degrees Celsius to Fahrenheit is =9/5*B5+32. Display the result with 0 decimal places. Change the column widths as necessary so that all the data is displayed entirely.

h) Enter the following Celsius temperatures in cell B5, one at a time: 0, 12, and –21. What Fahrenheit temperature does each of these convert to?

i) In cell D1, add a link to a Web site, such as www.weather.com, where users could access current temperature data.

j) Add your name in a header and the current date in a footer. Add gridlines and headings.

k) Save the modified Temp Conversion and print a copy.

l) Display the formulas in the cells instead of values. Print a copy.

Exercise 4 — Metric Conversions

Although the metric system (also called SI) is used throughout the world, the U.S. still widely depends on the English system of measurements.

a) Create a new workbook.

b) Enter the data and apply formatting using the Median theme as shown below:

	A	B	C	D
1	**Metric Conversions**			
2				
3	**English**		**Metric**	
4		cubic feet		cubic meters
5		cubic yards		cubic meters
6		feet		meters
7		gallons		liters
8		inches		centimeters
9		miles		kilometers
10		pounds		kilograms
11		square feet		square meters
12		square miles		square kilometers
13		square yards		square meters
14		yards		meters
15				

c) Save the workbook naming it Metric Conversions.

d) Use the information below to add the appropriate formulas that use cell references into cells C4 through C14:

cubic meters = 0.0283*cubic feet

cubic meters = 0.7646*cubic yards

meters = 0.3048*feet

liters = 3.7853*gallons

centimeters = 2.54*inches

kilometers = 1.6093*miles

kilograms = 0.3732*pounds

square meters = 0.0929*square feet

square kilometers = 2.59*square miles

square meters = 0.8361*square yards

meters = 0.9144*yards

e) Check your worksheet by entering 5 in cell A4. Cell C4 should display 0.1415 because it automatically calculates the metric equivalent of 5 cubic feet.

f) Enter the following measurements into cells A4 through A14. Your worksheet should look similar to:

	A	B	C	D
1	**Metric Conversions**			
2				
3	**English**		**Metric**	
4	5	cubic feet	0.1415	cubic meters
5	10	cubic yards	7.646	cubic meters
6	10	feet	3.048	meters
7	1	gallons	3.7853	liters
8	12	inches	30.48	centimeters
9	2	miles	3.2186	kilometers
10	25	pounds	9.33	kilograms
11	40	square feet	3.716	square meters
12	12	square miles	31.08	square kilometers
13	10	square yards	8.361	square meters
14	5	yards	4.572	meters
15				

g) Add your name in a header and the current date in a footer. Add gridlines and headings.

h) Save the modified Metric Conversions and print a copy.

i) Display the formulas in the cells instead of values. Print a copy.

Exercise 5 — Recipe

Estimate how much it will cost to make a recipe assuming all the ingredients need to be purchased.

a) Find a delicious recipe that requires eight or fewer ingredients.

b) Create a new workbook.

c) In cell A1, enter the title Calculating the Cost of a Recipe.

d) In cell A3, enter the name of the recipe.

e) In cell A5, enter the label Ingredient.

f) In cells B5, C5, and D5, enter the labels Store #1, Store #2, and Store #3.

g) Starting in cell A6, enter the name of each ingredient required to make the recipe.

h) Add an appropriate clip art graphic and then apply an appropriate theme and cell styles.

i) Use the Internet or newspapers to find the price of each ingredient at two different stores. Be sure the prices are for the same size container (but not necessarily the same brand name) of the ingredient.

j) Starting in cell B6, enter the corresponding ingredient prices.

k) Format the cells storing prices as currency with 2 decimal places.

l) Save the workbook naming it Recipe.

m) Add your name in a header and text Recipe in a footer. Add gridlines and headings.

n) Save the modified Recipe.

o) E-mail the worksheet to a classmate for collaboration. In the message area, add the text: Please compare prices at a third store and add the appropriate data.

p) Open the e-mail from your classmate and open the attachment. Use cell formatting to shade the best overall prices.

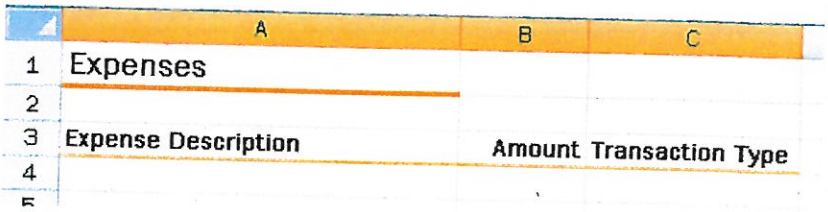
q) Save the modified Recipe document and print a copy.

Exercise 6 — Expenses, Expenses Analyzed

When determining a budget, it is important to come up with realistic figures. One way to determine actual expenses is to keep careful track of all money spent for a period. Keeping track of expenses for one week can work in some cases, but when there are responsibilities such as loan payments and utility bills, expenses need to be tracked for at least one month. Tracking expenses can also help determine where too much money is being spent.

a) Create a new workbook.

b) Enter data and apply formatting using the Trek theme as shown below:



	A	B	C
1	Expenses		
2			
3	Expense Description	Amount	Transaction Type
4			

c) Format cells B4 through B15 as currency with 2 decimal places.

d) Save the workbook naming it Expenses.

e) Save the receipts from every purchase made over the next week and be sure to record every check in your checkbook register.

f) Update the worksheet with the saved receipts and checkbook register. Enter each transaction on a separate row in chronological order. In the Transaction Type column, enter Cash, Credit, or Check as appropriate.

g) Add your name in a header and the current date in a footer. Add gridlines and headings.

h) Use cell styles to shade alternate rows.

i) Add a formula that sums the expenses and a descriptive label. Format the formula and labels appropriately.

j) Save the modified Expenses.

k) Create a new Word document. Write a paragraph that analyzes your spending. Describe your source of income. Is your spending for the period too high relative to your income for the same period? Is there one type of spending that could be reduced? Spending with credit can be more expensive than spending with cash because credit incurs interest charges. Are credit expenses too high?

l) Save the Word document naming it Expenses Analyzed.

m) Below the paragraph that analyzes your spending, place a copy of the data from the Expenses worksheet.

n) Add a footer with your name centered.

o) Save the modified Expenses Analyzed document and print a copy.

Exercise 7 — Personal Finances

Worksheets can be helpful with personal financial management.

a) Create a new workbook.

b) Enter data and apply formatting as shown below:

	A	B	C	D	E
1		**Description of Transaction**	**Payment (Debit)**	**Deposit (Credit)**	
2					
3	2-Feb-09	Opening Deposit		$200.00	
4	5-Feb-09	Cell Phone Bill	$20.00		
5	9-Feb-09	Paycheck		$100.00	
6	10-Feb-09	Sally's Diner	$15.35		
7	11-Feb-09	Coral Square Cinema	$6.75		
8	17-Feb-09	Deposit		$25.00	
9	18-Feb-09	Book Palace	$15.98		
10	19-Feb-09	Full Belly	$10.50		
11	24-Feb-09	Coral Square Mall	$5.75		
12	24-Feb-09	Coral Gas	$15.00		
13	27-Feb-09	Deposit		$100.00	
14					

c) Save the workbook naming it Personal Finances.

d) In cell E1, enter the label Balance. Right align and bold the label if necessary.

e) In column E, enter formulas that use cell references to calculate the balance after each transaction. To calculate the balance, subtract the expense from the previous balance and add the income to the previous balance.

f) In cell B14, enter the label Total: and then right align and bold it. Enter formulas that calculate the total expenses and total income for the month.

g) Apply an appropriate theme and cell styles.

h) Add your name in a header and the current date in a footer. Add gridlines and headings.

i) Save the modified Personal Finances and print a copy.

j) Display the formulas in the cells instead of values. Print a copy.

Exercise 8 — Income Statement

An income statement lists a company's revenue (money they earn), expenses (money they pay out), and net income/loss (revenue minus expenses) for a specific time period. Fluffy Bakery is a small home business that wants to use a worksheet to produce an income statement.

a) Create a new workbook.

b) Enter data and apply formatting using the Equity theme as shown below:

	A	B	C	D	E
1		Fluffy Bakery			
2		Income Statement			
3		for the years 2007-2009			
4					
5		2007	2008	2009	
6	**Revenue:**				
7	Cookie Sales	$15,500	$16,896	$17,864	
8	Cake Sales	$27,589	$26,298	$25,982	
9	Bread Sales	$24,980	$25,298	$25,398	
10	Total Revenues:				
11	**Expenses:**				
12	Advertising	$5,000	$4,500	$4,500	
13	Baking Supplies	$2,000	$1,000	$2,750	
14	Ingredients	$13,275	$15,298	$16,490	
15	Salaries	$30,000	$30,000	$35,000	
16	Utilities	$6,570	$7,250	$8,090	
17	Total Expenses:				
18	Net Income/(Loss):				
19					

c) Save the workbook naming it Income Statement.

d) In row 10, enter formulas that calculate the total revenue for each year.

e) In row 17, enter formulas that calculate the total expenses for each year.

f) In row 18, enter formulas that use cell references to calculate the net income or loss for each year. The net income/loss is calculated by subtracting total expenses from total revenue. Format the values as currency with 0 decimal places, if necessary.

g) Add your name in a header and the current date in a footer. Add gridlines and headings.

h) Save the modified Income Statement.

i) Display the formulas in the cells instead of values. Print a copy.

Exercise 9 — FRANKLIN TOURS

The FRANKLIN TOURS document contains a partial newsletter. The TOURS document and the TOUR PRICES workbook contain information for the newsletter. Open FRANKLIN TOURS, TOURS, and TOUR PRICES, which are data files for this text, and complete the following steps:

a) Place a copy of all the text in the TOURS document into the FRANKLIN TOURS document in the blank paragraph at the end of the newsletter.

b) The data in cells A1 through B5 in the TOUR PRICES workbook needs to be added to the FRANKLIN TOURS newsletter. Use an appropriate theme and cell styles to appropriately format the worksheet and then place a copy of the data into the newsletter in the blank paragraph at the end of the newsletter.

c) In the FRANKLIN TOURS document, create a footer with your name.

d) Save the modified FRANKLIN TOURS and print a copy.

Exercise 10 — Budget

A student wants to use a worksheet to create a personal budget for her fall semester in college.

a) Create a new workbook.

b) Enter data and apply formatting using the Office theme as shown below:

	A	B	C	D	E	F	G	H	I	J
1	**Personal Budget**									
2										
3		**Sep-09**		**Oct-09**		**Nov-09**		**Dec-09**		
4		**Budgeted**	**Actual**	**Budgeted**	**Actual**	**Budgeted**	**Actual**	**Budgeted**	**Actual**	
5	**Income:**									
6	Loan	$7,000	$7,000	$0	$0	$0	$0	$0	$0	
7	Job	$1,000	$925	$500	$465	$500	$485	$600	$725	
8	Parents	$5,500	$5,500	$0	$0	$0	$0	$0	$0	
9	**Total:**									
10	**Expenses:**									
11	Tuition	$6,000	$5,943	$0	$0	$0	$0	$0	$0	
12	Room/Board	$5,500	$5,575	$0	$0	$0	$0	$0	$0	
13	Books	$700	$635	$0	$45	$0	$0	$0	$0	
14	Food	$300	$315	$300	$325	$300	$320	$250	$375	
15	Entertainment	$150	$0	$50	$80	$50	$0	$100	$100	
16	Clothes	$50	$0	$50	$80	$50	$0	$100	$100	
17	**Total:**									
18										

c) Save the workbook naming it Budget.

d) In cell B9, enter a formula that calculates the total budgeted income for September. Use the cell's fill handle to copy the formula to cells C9 through I9.

e) In cell B17, enter a formula that calculates the total budgeted expenses for September. Use the cell's fill handle to copy the formula to cells C17 through I17.

f) In cell A18, enter the label: Savings: Right align the label and format it as italic. Enter formulas that use cell references to calculate the savings for each month. Savings are calculated by subtracting the total expenses from the total income.

g) Use conditional formatting to create a rule that formats the data in cells C17, E17, G17, and I17 in a light red fill if the value is a negative number. Format the columns containing the Actual data to be just wide enough to display the data.

h) Add your name in a header and the current date in a footer. Add gridlines and headings.

i) Save the modified Budget and print a copy.

j) Display the formulas in the cells instead of values. Print a copy.

Exercise 11 — Index Funds

A mutual fund is a collection of stocks and/or bonds. A stock is a share of ownership in a company and a bond is a loan funded by investors. Mutual fund investors own shares that represent a portion of the mutual fund holdings. Mutual funds offer investment diversification because a single fund can consist of hundreds or even thousands of different stocks and/or bonds. Such diversification minimizes the effects of stocks performing poorly, but also dilutes the effects of stocks performing well. Important considerations for most mutual funds are:

- Mutual funds typically have a manager who buys and sells stocks and/or bonds.
- Mutual funds require fees to pay for management. These fees, called the expense ratio, reduce the return on investment.
- The majority of mutual funds do not perform as well as the market average.

Unlike most mutual funds, a stock index fund consists of only stocks from a particular index. An index is a defined subset of all stocks available on stock markets. A statement about how "the market" is doing is referring to the performance of the Dow or another index. Popular indexes include:

- **Dow Jones Industrial Average (DJIA or Dow)** A collection of 30 blue-chip stocks. Blue-chip stocks are widely held and are considered solid, reliable, and having sustained growth. Stocks include Microsoft, Intel, Coca-Cola, McDonald's, and American Express.
- **Standard & Poor's 500 (S&P 500)** A collection of the 500 largest company stocks. Stocks include Microsoft, Wal-Mart, and IBM.
- **Nasdaq 100** A collection of the 100 largest company stocks listed on the Nasdaq. Stocks include Microsoft, Intel, Dell, and Yahoo!.
- **Nasdaq Composite** A collection of all stocks listed on the Nasdaq.
- **Amex Composite** A collection of all stocks listed on the American Stock Exchange.
- **Russell 2000** A collection of 2,000 small-company stocks. City Bank, Zale, and Fossil are stocks in the Russell 2000.
- **Wilshire 5000** Although the name seems to indicate a set of 5,000 stocks, the Wilshire index actually contains over 6,000 stocks. Sometimes referred to as the Total Stock Market Index because it includes the stock for nearly every U.S. corporation.

Because of its holdings, a stock index fund typically performs as well as the market average. This means stock index funds outperform most other mutual funds. Stock index funds also have very low expense ratios and are offered by many companies.

The first index fund was started in 1975 by the Vanguard Group. The Vanguard 500 Index Fund (VFINX) remains one of the most popular and outperforms the vast majority of other mutual funds. Other index funds include the Vanguard Total Stock Market Fund (VTSMX) and the Vanguard TSM VIPERS (VTI), which follow the Wilshire 5000 index.

a) Create a new workbook. Enter and format labels as shown. The current date should appear below the Price label:

	A	B	C	D	E	F
1	**Index Funds**					
2						
3	**Fund Name**	**Symbol**	**Price**	**Price**	**Price**	**Price**
4			**9/21/2009**			
5						
6						

b) Add the three Vanguard index fund names and their symbols to the worksheet.

c) Apply an appropriate theme and cell styles.

d) Save the workbook naming it Index Funds.

e) Use a Web site such as finance.yahoo.com to get a price quote for each of the funds and then enter the information into column C.

f) Format the prices as currency with 2 decimal places.

g) Research and then choose three other index funds using the Internet, newspapers, or financial magazines. Add the three selected funds, to the Index Funds workbook.

h) Update the Index Funds workbook on three different days to include new fund quotes.

Exercise 12 — Mileage Log, April Mileage Log

Many jobs, such as sales and marketing positions, require employees to travel outside the office using their own vehicle. For this type of travel, employees are required to keep track of their mileage on a mileage log form and then submit the form for reimbursement based on a rate per kilometer.

a) Create a new workbook.

b) Enter data and apply formatting using the Flow theme as shown below:

	A	B	C	D	E	F	G
1	**Flat Technologies**						
2	**Monthly Mileage Log**						
3				**Employee Name:**			
4				**Submit Date:**			
5							
6	**Date**	**Description**	**From**	**To**	**Odometer**		**Mileage**
7					**Start**	**Finish**	
8					0	0	
9					0	0	
10					0	0	
11					0	0	
12					0	0	
13					0	0	
14					**Total Mileage**		
15					**Rate**		
16					**Reimbursement**		
17							

c) In cell G8, enter a formula to calculate the mileage from the starting point to the finish point. Use the cell's fill handle to copy the formula to cells G9 through G13. In the Auto Fill Options button, select Fill Without Formatting.

d) Enter a formula to calculate the total mileage.

e) Employees are reimbursed at a rate of $0.32 per kilometer. Type the rate in the appropriate cell and then enter a formula to calculate the total reimbursement. Format the cells appropriately.

f) Save the worksheet as a template naming it Mileage Log and close Mileage Log.

g) Create a new workbook based on the Mileage Log template.

h) Enter your name for the Employee Name and today's date for the Submit Date.

i) Starting in cell A8, enter the data:

Date	Description	From	To	Start	Finish
4/2/2009	Microsoft Seminar	Miami	Boca Raton	33,580	33,625
4/28/2009	Sales Call	Boca Raton	Palm Beach	34,800	34,830
4/28/2009	Sales Call	Palm Beach	Boca Raton	34,830	34,860

j) Add your name in a header and the current date in a footer. Add gridlines and headings.

k) Save the worksheet naming it April Mileage Log and print a copy.

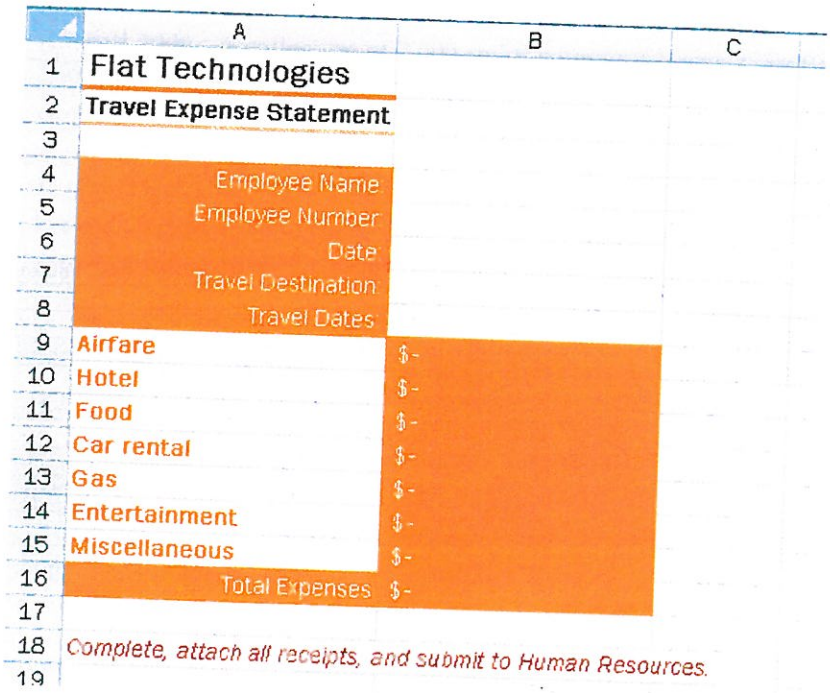
l) E-mail the worksheet to a classmate. In the message area, add the text: Attached please find my monthly mileage log.

Exercise 13 — Travel Expenses, Chicago Travel Expenses

Many jobs require travel. When traveling for business, employees are required to fill out a travel expense form for any out-of-pocket expenses.

a) Create a new workbook.

b) Enter data and apply formatting using the Trek theme as shown below. Cells B9 through B16 are formatted for the Accounting currency style and 0 (zero) has been typed into each cell. Accounting style displays a dash in place of 0:



c) Enter a formula to calculate the total expenses.

d) Save the worksheet as a template naming it Travel Expenses and then close Travel Expenses.

e) Create a new workbook based on the Travel Expenses template.

f) Enter your name for the Employee Name, any 4-digit number for the Employee Number, and today's date for the Date. Enter Chicago for the Travel Destination and enter 05/15/09 - 05/20/09 for the Travel Dates.

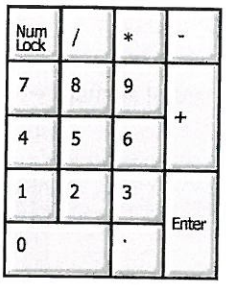
g) Use the Internet to research the cost of a five-day trip to Chicago. Include a car rental for the entire five days. Type the estimated amounts into the appropriate cells.

h) Add a header with your name. Add gridlines and headings.

i) Save the worksheet naming it Chicago Travel Expenses and print a copy.

Exercise 14 — KEYPAD

The numeric keypad can make the entering of large amounts of numeric data more efficient. It also allows easy access to the mathematical operators +, -, *, and /. Most keyboards require pressing the Num Lock key on the numeric keypad before numbers can be entered.



Before beginning to enter data, the right hand should be placed lightly on the keypad with slightly curved fingers. The right index finger is placed on the number 4 key, the right middle finger is placed on the number 5 key, the right ring finger is placed on the number 6 key, and the right pinky finger is placed on the + key. The right thumb is placed over the 0 key. With the fingers placed as just described, this is called the home position. Open KEYPAD, which is an Excel data file for this text, and complete the following steps:

a) Data entry into a range of cells can be made easier by selecting the range before entering the data. In a selected range, pressing Enter makes the next cell in the range active. When the last cell in a column is reached, pressing Enter makes the cell at the top of the next column in the range active. Select cells A1 through G6 and then place the right hand on the keypad in the home position as described above.

b) Enter the following numbers starting in cell A1, pressing the Enter key with the right pinky after each number. Do not look at the right hand while entering data, refer only to the picture of the keypad below. Note that the data entered will not be entered as a formula because the data does not begin with an equal sign (=).

	A	B	C	D	E	F	G
1	444	555	666	405	444	4++	55+
2	445	446	444	44+	445	5+5	445
3	455	466	400	4++	555	6+5	554
4	555	545	565	566	666	5+0	505
5	666	646	656	606	506	0+4	6+6
6	604	404	505	406	405	6++	0+0
7							

c) Repeat part (b) until the characters can be typed without referring to the keypad graphic.

d) The number 7 is typed using the index finger of the right hand, the number 8 is typed using the middle finger of the right hand, the number 9 is typed using the ring finger of the right hand and the - is typed using the pinky finger of the right hand. Select cells A8 through G13 and enter the following numbers in the same manner as part (b):

	A	B	C	D	E	F	G
7							
8	777	888	999	77-	888	999	9--
9	778	779	777	778	779	888	778
10	788	7799	898	788	799	787	878
11	888	878	989	878	878	989	9--
12	999	979	787	88-	979	7--	789
13	797	777	888	-88	797	8--	987
14							

e) Repeat part (d) until the characters can be typed without referring to the keypad graphic.

f) The number 1 is typed using the index finger of the right hand, the number 2 is typed using the middle finger of the right hand, the number 3 and the . key are typed using the ring finger of the right hand. Select cells A15 through G20 and enter the following numbers in the same manner as parts (b) and (d):

	A	B	C	D	E	F	G
14							
15	111	212	363	171	252	112	1.2
16	121	222	282	147	414	113	1.3
17	131	213	111	258	222	242	2.3
18	222	222	222	369	115	282	2.1
19	223	252	333	216	114	273	3.2
20	221	141	282	246	116	198	2.1
21							

g) Repeat part (f) until the characters can be typed without referring to the keypad graphic.

h) The / key is typed using the middle finger of the right hand, the * key is typed using the ring finger of the right hand, and the + key is typed using the pinky finger of the right hand. Select cells A22 through G27 and enter the following numbers in the same manner as parts (b), (d), and (f):

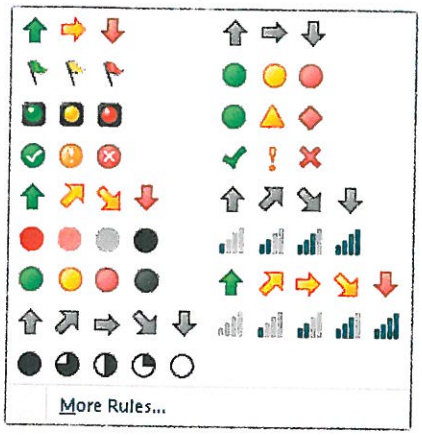
	A	B	C	D	E	F	G
21							
22	4/5	4*5	4*5	6/4	1*3	-7*3	3+3
23	5/5	5*5	5*6	5/5	5+6+9+3	-1*2	5+5
24	1*4	2-6	6+4	4*7	2+6	5+5+4	4*8
25	4*5	3+5	2+6	3+5	-4+8	1*1.5	3+2+5
26	4+5	3/3	3/3	5.6*1.3	5+3	4+6/1	4.5*4+1
27	0.5*1.3	4-5	0.6*1.08	3/6	1+1	5*8-2.5	2+9
28							

i) Repeat part (h) until the characters can be typed without referring to the keypad graphic.

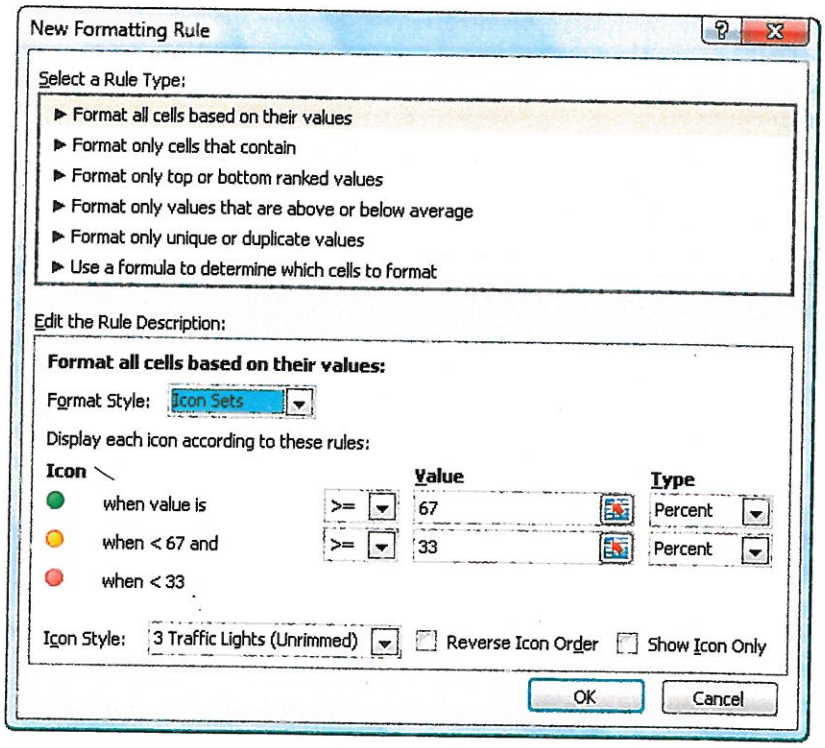
j) Close the workbook without saving changes.

Exercise 15 — SALES ANALYSIS

Icon sets are a conditional formatting option in Excel where an icon is used to represent the value of that cell relative to the other cells in the selected range. Icon sets include:



To use icon sets, select a range of data and then click Home → Conditional Formatting → Manage Rules. A dialog box is displayed. Select New Rule and then select Icon Sets in the Format Style list:



An icon style can then be selected from the Icon Style list and a rule for each icon can be specified in the appropriate Value and Type lists. Open SALES ANALYSIS, which is an Excel data file for this text, and complete the following steps:

a) In cell E1, type the heading Performance and adjust the column width appropriately.

b) In cell E2, enter a formula that calculates sales performance by subtracting the quota from the sales. Copy the formula to cells E3 through E30.

c) Select the data in column E and create a conditional formatting rule using an icon set that analyzes the performance data.

d) Add your name in a header and the current date in a footer. Add gridlines and headings.

e) Save the modified SALES ANALYSIS and print a copy.

Exercise 16 — Survey Results

A survey is used to gather a sample of data or opinions considered to be representative of a whole. Businesses and organizations use surveys as a method of obtaining feedback from their customers or clients. The data collected is used to address problems and make improvements.

a) In a small group, design a school survey with at least 5 questions. Possible question topics include cafeteria food, school spirit, access to technology, and so forth. Responses should be on a scale similar to 1 - Poor, 2 - Satisfactory, 3 - Good, 4 - Excellent.

b) Survey at least 20 students.

c) Develop a worksheet plan to record the survey data.

d) Create a new workbook and enter the survey data. Calculate the average response for each question.

e) Add your name in a header and the current date in a footer. Add gridlines and headings.

f) Save the workbook naming it Survey Results and print a copy.