

Concepts Review

True/False Questions

Each of the following statements is either true or false. Select your choice by indicating T or F.

- T F 1. PowerPoint offers only one slide layout choice for slides with charts.
- T F 2. The sample worksheet in Microsoft Excel is always blank when you create a new chart.
- T F 3. You cannot see the chart while you are working on the worksheet.
- T F 4. You can change the colors of columns in a chart to whatever you find appealing.
- T F 5. The units shown on the value axis are set by PowerPoint and cannot be changed.
- T F 6. Every chart must include a legend.
- T F 7. You must use a two-dimensional chart if you want to include a secondary axis.
- T F 8. Double-clicking a pie slice or column enables you to change its size.

Short Answer Questions

Write the correct answer in the space provided.

1. How can you delete all of the sample data in the worksheet at one time?

2. How do you change the grouping of the data series on a chart from columns to rows?

3. While working on a chart, how do you display the worksheet if it is not visible?

4. What type of number formatting do you apply to values to display dollar signs?

5. What group found on the Chart Tools Format tab can you use to select different parts of a chart?

6. Which button can you click to change the color of a selected pie slice?

7. How can you change the font size for chart labels without opening a dialog box or using the Ribbon?

8. On a 2-D column chart, how can you change one of the data series to be displayed as an area chart?

Critical Thinking

Answer these questions on a separate page. There are no right or wrong answers. Support your answers with examples from your own experience, if possible.

1. How do you decide if a chart is needed in your presentation? Do you think a presentation can have too many charts? Explain your answer.
2. Imagine that you are trying to explain to someone how you spend your waking hours during a typical day. Can you think of a chart that would break down your activities into different categories and show how much time you spend on each during the day? Describe the chart's appearance and the values that you would include.

Skills Review

Exercise 6-20

Insert a column chart.





1. Open the file **FinSum1**.
2. Create a chart by following these steps:
 - a. Insert a new slide after slide 2 that uses the **Title and Content** layout.
 - b. Key **2007 Quarterly Earnings** for the title.
 - c. Click the Insert Chart icon  in the center of the content placeholder.
 - d. Choose a **3-D Clustered Column** chart and click **OK**.
 - e. In Microsoft Excel, click the upper-left box on the worksheet to select all the existing data and press **Delete**.
 - f. Key the data shown in Figure 6-21.


Figure 6-21
Worksheet


	A	B	C	D	E	F
1		Q1	Q2	Q3	Q4	
2	New York	1888	2008	2116	1543	
3	Los Angeles	1743	1799	1844	1539	
4	Miami	1634	1439	1783	1469	
5						

3. Click in any cell of row 5 that was used in the sample worksheet. Right-click and then choose **Delete** from the shortcut menu. Choose **Entire Row**; then click **OK**. This step removes the unused row and the empty space on the chart.
4. Close Microsoft Excel.
5. Click the chart once in Normal view to select it; then use the chart's corner sizing handles to reduce the chart's height by approximately 0.5 inches, and adjust the chart's position for even spacing on the slide.
6. Edit the chart by following these steps:
 - a. Be sure the chart is selected; then from the Chart Tools Design tab, in the Data Group, click Edit Data .
 - b. Click cell E3 (Q4 for Los Angeles) to select it.
 - c. Key **1849** to replace the value "1539." Press **Enter**.
 - d. Still working on the Chart Tools Design tab, in the Data group, click the Select Data button . In the Select Data Source dialog box, click the **red arrow** at the end of the Chart Data Range box.
 - e. Click in Cell A1 and drag the pointer through E4 (the end of the data).
 - f. Click the **red arrow** again, and click **OK**.
 - g. Still working on the Chart Tools Design tab, in the Data group, click the Switch Row/Column button .
 - h. Close Microsoft Excel.
7. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-20your initials]** as the footer.
8. Move to slide 1 and save the presentation as **[6-20your initials]** in your Lesson 6 folder.
9. View the presentation as a slide show; then preview and print it as handouts, three slides per page, grayscale, framed. Close the presentation.

Exercise 6-21


Edit and format an existing chart, change chart style, format the legend.

1. Open the file **Finance2**.
2. Edit the chart on slide 4 by following these steps:
 - a. Click the chart to activate it.
 - b. From the Chart Tools Design tab, in the Data group, click the Edit Data button  to open Microsoft Excel.

- c. On the worksheet, click cell B3 containing the value “-2%” and key **2** to overwrite the negative value with a positive value. Press **Enter**.
 - d. Close Microsoft Excel.
3. Change the style of the chart by following these steps:
 - a. From the Chart Tools Design tab, in the Chart Styles group, choose the More button .
 - b. Choose **Style 25**.
 4. Change the font for the Horizontal (Category) Axis labels by following these steps:
 - a. Click the category axis label “2007” to select the category axis.
 - b. Right-click on the axis and make the following changes from the floating font group: Choose the **Tahoma** font, a **20 point** font size, and the **Brown, Background 2** font color.
 5. Format the Vertical (Value) Axis by following these steps:
 - a. Right-click a number on the value axis and choose **Format Axis**.
 - b. For **Major unit** choose **Fixed** and key **.05**. Click **Close**.
 - c. Right-click on the axis and make the following changes from the floating font group: Choose the **Tahoma** font, a **20 point** font size, and the **Brown, Background 2** font color.
 6. Format the legend by following these steps:
 - a. Right-click the legend and choose **Format Legend** from the shortcut menu.
 - b. Under the Legend Position heading, choose **Top Right** and click **Close**.
 - c. Use the floating font group to change the legend font to **Tahoma** at a **16 point** font size.
 7. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-21your initials]** as the footer.
 8. Move to slide 1 and save the presentation as **[6-21your initials]** in your Lesson 6 folder.
 9. View the presentation as a slide show; then preview and print the presentation as handouts, four slides per page, grayscale, landscape, framed. Close the presentation.

Exercise 6-22




Add a chart, format chart axes, add a secondary axis, and combine chart types.

1. Open the file **Finance3**.
2. Add a slide after slide 3 with the **Title and Content Layout**.
3. Key the title **2007 Special Events Revenue**.
4. Click the Insert Chart button  in the content placeholder. In the Column category, choose the **Clustered Column** chart. Delete the sample data and key the information in Figure 6-22. So that you can see all of the words entered into each cell of the worksheet in Microsoft Excel,

select the cells in the worksheet; then from the Home tab, in the Cells group, click **Format** and then choose **AutoFit Column Width**.

Figure 6-22
Worksheet

	A	B	C	D	E	F
1		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
2	Special Events	71	141	118	149	
3	Total Revenue	800	1076	1149	1207	
4						

5. Once the data is keyed, click on the row 4 heading and drag down to select both rows 4 and 5. Right-click and choose **Delete**.
6. In Microsoft PowerPoint, from the Chart Tools Design tab, in the Data group, click the Select Data button . In the Select Data Source dialog box, in the Chart data range box, change the D to an E and click **OK**.
7. From the Chart Tools Design tab, in the Data group, click the Switch Row/Column button .
8. Close Microsoft Excel.
9. Add a secondary axis to the chart by following these steps:
 - a. Right-click one of the “Total Revenue” columns and choose **Format Data series** from the shortcut menu.
 - b. In the **Plot Series On** area, click **Secondary axis**. Click **Close**.
10. Change the chart type for the “Total Revenue” columns by following these steps:
 - a. Be sure the columns in this data series are still selected.
 - b. From the Chart Tools Design tab, in the Type group, click Change Chart Type button .
 - c. In the **Line** category, choose the **Line** chart.
 - d. Click **OK**.
11. Change the formatting of the line for the data series by following these steps:
 - a. Select the line (being careful not to select the gridlines), then right-click and choose **Format Data Series** from the shortcut menu.
 - b. Click **Line Style** at the left of the dialog box and change the **Width** to **8 points**.
 - c. Click **Marker Options** at the left of the dialog box and change the **Marker Type** to **Built-In** and the size to **15**.
 - d. Click **Marker Fill** at the left of the dialog box and change to a **Solid Fill**, then make the color **Tan, Text 2**. Click **Close**.
12. Format the secondary value axis by following these steps:
 - a. Right-click one of the numbers on the right side of the chart (on the Secondary Vertical (Value) Axis) and choose **Format Axis**.
 - b. Change the **Major unit** to **Fixed** and key **500**.
 - c. Click **Number** at the left of the dialog box and choose **Currency**. For **Decimal places** key **0** and for **Symbol** choose **\$ English (United States)**. Click **Close**.



TIP

You started with a 2-D chart in this exercise since a 2-D chart is required to add a secondary axis.



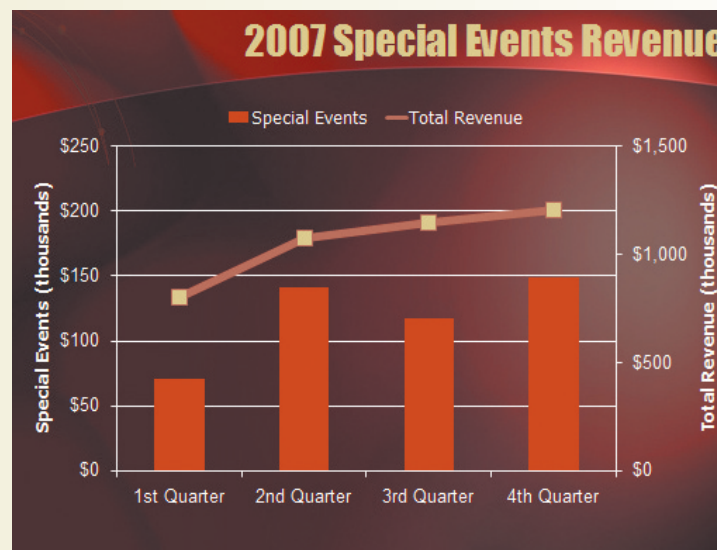
- d. Right-click the secondary axis again and use the floating font group to change the font to **Arial**.
13. Apply the following formatting to the Vertical (Value) Axis (on the left side of the chart) using the same process as for the secondary axis.
 - a. Right-click the Vertical (Value) Axis and choose **Format Axis**.
 - b. Change the **Maximum** to **Fixed** and **250** and the **Major unit** to **Fixed** and **50**.
 - c. Click **Number** at the left of the dialog box and choose **Currency**. For **Decimal places** key **0** and for **Symbol** choose **\$ English (United States)**. Click **Close**.
 - d. Right-click the vertical axis again and use the floating font group to change the font to **Arial**.
14. Change the formatting of the Horizontal (Category) Axis. Right-click the category axis and change the font to **Arial** using the floating font group.
15. Add chart titles and a legend by following these steps:
 - a. Click to activate the chart.
 - b. From the Chart Tools Layout tab, in the Labels group, click the Axis Titles button .
 - c. Choose **Primary Vertical Axis Title** and **Rotated Title**.
 - d. Select the text that appears in the text box; delete it, and key **Special Events (thousands)**.
 - e. Still working on the Chart Tools Layout tab, in the Labels group, click the Axis Titles button .
 - f. Choose **Secondary Vertical Axis Title** and **Rotated Title**.
 - g. Select the text that appears in the text box; delete it, and key **Total Revenue (thousands)**.
16. Right-click the legend and choose **Format Legend** from the shortcut menu and change the legend position to **Top**. Click **Close**.
17. Reposition the chart, so it is centered horizontally on the slide, as shown in Figure 6-23.

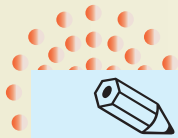
Figure 6-23
Completed chart



18. Create a handout header and footer: Include the date and your name as the header, and the page number and text [6-22your initials] as the footer.
19. Move to slide 1 and save the presentation as [6-22your initials] in your Lesson 6 folder.
20. View the presentation as a slide show; then preview and print the presentation as handouts, four slides per page, grayscale, landscape, framed. Close the presentation.

Exercise 6-23

Create and format a pie chart; add shapes, text boxes, and color.





TIP

To use an em dash (the long straight line), key two hyphens with no space around them. Then space once after 2007 and the two hyphens will change to an em dash, a more contemporary punctuation mark. This adjustment is controlled with PowerPoint's AutoCorrect feature.

Figure 6-24
Worksheet

	A	B	C
1		Unit Sales	
2	T-Shirts	4208	
3	Bike Jerseys	1112	
4	Visors	528	
5	Knee Pads	663	
6	Elbow Pads	967	
7			

1. Open the file **Apparel2**.
2. Insert a new slide after slide 2 that uses the **Title and Content** layout. Key the title **Apparel Mix— 2007**.
3. Create a pie chart by following these steps:
 - a. Click the Insert Chart button  in the center of the content placeholder.
 - b. Click the **Pie** category and choose the **Pie in 3-D** chart type. Click **OK**.
 - c. On the worksheet, clear the sample information and key the information shown in Figure 6-24.
4. The sample data that you earlier deleted established a range of cells for the chart. However, not all of the current data is displayed in that range. Notice on the pie chart that no slice for Elbow Pads is included even though it is keyed on the worksheet.
5. From the Chart Tools Design tab, click **Select Data**. On the worksheet, notice that row 6 has not been included in the selection. Highlight all the cells for the data you entered (A1 through B6) then click **OK**. Now all of the items have a slice.
6. Close Microsoft Excel.
7. Format a pie slice by following these steps:
 - a. Click the dark blue pie slice “T-shirts” once to select the entire pie.
 - b. Click the dark blue slice again to select the individual slice.
 - c. From the Chart Tools Format tab, in the Shape Styles group, click the Shape Fill button  and choose **Light Blue** from the Standard Colors category. This sets the color apart from the other blues.
 - d. Click these slices and change to the following standard colors: Bike Jerseys, light green; Visors, yellow; Knee Pads, red; and Elbow Pads, purple.
8. Right-click the pie’s legend and choose **Delete** from the shortcut menu.



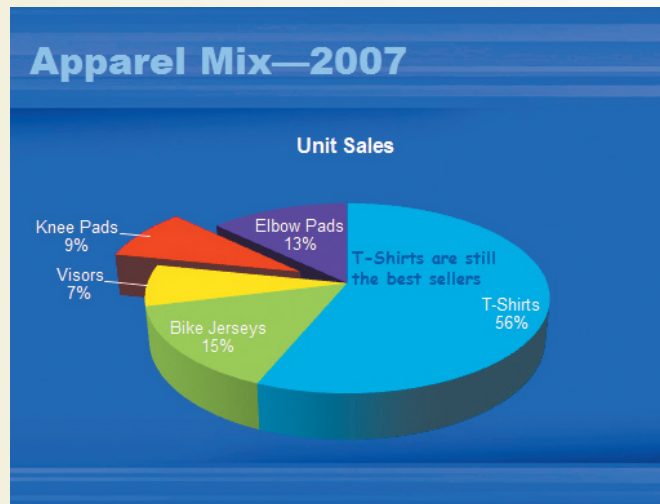
9. Add data labels by following these steps:
 - a. Activate the chart.
 - b. From the Chart Tools Layout tab, in the Labels group, click the Data Labels button  and choose **More Data Label Options**.
 - c. In the Label Contains area, select the **Category name** and the **Percentage** check boxes and deselect the **Value** check box.
 - d. In the Label Position area, choose **Best Fit**.
 - e. Click **Close**.
10. Explode a pie slice by following these steps:
 - a. Select the red “Knee Pads” slice by clicking it twice.
 - b. Drag the slice slightly away from the center of the pie. The pie chart will become slightly smaller because of the additional space this requires. Therefore, increase the chart area slightly to compensate for this change.
 - c. Center the chart area horizontally on the slide.
11. Insert a text box by following these steps:
 - a. From the Insert tab, in the Text group, click the Text Box button .
 - b. Click outside the chart area; draw the text box and key **T-Shirts are still the best sellers**.
 - c. Move the text box on top of the large light blue T-shirt pie slice. Change the text box font to **18-point Comic Sans MS, bold, Dark Blue, Accent 1**. Resize the box so the text fits on two lines as shown in Figure 6-25.

Figure 6-25
Exploded slice and
text box



12. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-23your initials]** as the footer.
13. Move to slide 1 and save the presentation as **[6-23your initials]** in your Lesson 6 folder.
14. View the presentation as a slide show; then preview and print the presentation as handouts, four slides per page, grayscale, framed. Close the presentation.

Lesson Applications

Exercise 6-24

Create a presentation containing a column chart and format the chart.

1. Start a new presentation using the **Median** design theme and the **Aspect** theme color.
2. Using the text in Figure 6-26, create a three-slide presentation; use the **Title Slide** layout for slide 1, and the **Title and Content** layout for slides 2 and 3. The first line of each is the title for the slide.

Figure 6-26

Slide 1 Three Years of Phenomenal Sales

Slide 2 Highlights

- New York revenue still increasing
- Miami and Los Angeles meeting goals
- Revenues reach 120% of budget

Slide 3 Sales by Region-2005 to 2007

3. Right-align the title on slide 1.
4. On slide 3, create a 3-D Clustered Column chart by using the data shown in Figure 6-27. Delete row 5.

Figure 6-27
Worksheet

	A	B	C	D	E
1		New York	Los Angeles	Miami	
2	2005	5650	4183	3843	
3	2006	8753	5892	6388	
4	2007	11332	9852	8487	
5					

5. Close Microsoft Excel.
6. Change the Vertical (Value) Axis options to have a **Maximum** of **12000** and a Major unit of **3000**. Change its Number formatting to **\$ English (U.S.)** with no decimals.

7. Change to **Chart Style 3**.
8. For the value and category axes and legend, change the font to 16 points, not bold.
9. Move the legend to the bottom. Resize, if necessary.
10. Reposition the chart to keep spacing on both sides even. Resize if needed.
11. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-24your initials]** as the footer.
12. Move to slide 1 and save the presentation as **[6-24your initials]** in your Lesson 6 folder.
13. View the presentation as a slide show; then preview and print it as handouts, three slides per page, grayscale, framed. Close the presentation.

Exercise 6-25

Create and format a pie chart.

1. Open the file **Expense2**.
2. Insert a new slide after slide 1 that uses the **Title and Content** layout. Key the title **Expense Breakdown**.
3. Create a 2-D pie chart on the new slide 2 by using the data from Figure 6-28.

Figure 6-28
Worksheet

	A	B
1		2007 Expenses
2	Food	2190
3	Payroll	1813
4	Depreciation	577
5	Lease	1737
6		

4. Add **Percentage** data labels only to the chart. Make them bold and change the font size to 32 points.
5. Increase the legend font to 20 points, bold.

6. Change the chart title size to 28 points, bold and move it to the top left of the chart area.
7. Change the chart to a **Pie in 3-D**.
8. Explode the “Food” slice of the pie slightly.
9. If any of the percentage labels move off the slices, then right-click, choose **Format Data Label**, and choose the Label Position **Inside End** or click and drag them onto the slices of the pie.
10. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-25your initials]** as the footer.
11. Move to slide 1 and save the presentation as **[6-25your initials]** in your Lesson 6 folder.
12. View the presentation as a slide show; then preview and print it as handouts, six slides per page, grayscale, scaled for paper, framed. Close the presentation.

Exercise 6-26

Insert a chart; change the chart to a combination chart; format the chart text, data series, and legend; add a secondary axis; and add a shape.

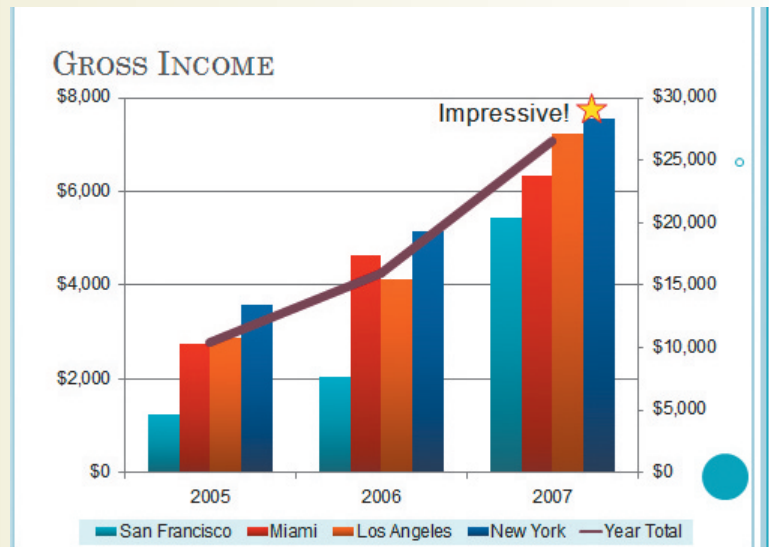
1. Open the file **Earnings2** and apply the **Oriel** design theme using the **Concourse** theme color.
2. Resize and reposition the title on slide 1 so that it is right above the subtitle.
3. Insert a new slide between slides 2 and 3 that uses the **Title and Content** layout. Key the title **Gross Income**.
4. Create a clustered column chart on the new slide by using the data in Figure 6-29.

Figure 6-29

	A	B	C	D	E
1		2005	2006	2007	
2	San Francisco	1246	2033	5432	
3	Miami	2734	4630	6325	
4	Los Angeles	2871	4126	7235	
5	New York	3566	5135	7555	
6	Year Total	10417	15924	26547	
7					

5. Select all of the rows and columns in the worksheet so that all data is included in the chart.
6. Switch Row/Column.
7. Close Microsoft Excel.
8. Be sure you are using a 2-D column chart.
9. Plot the “Year Total” data series on a secondary axis. Change the chart type for the series to **Line Chart**. Format the line in a matching color and change the width to **10**.
10. Change the font for the Vertical (Value) Axis, Horizontal (Category) Axis, the Secondary Vertical (Value) Axis, and Legend to 16-point Arial (not bold).
11. For the Vertical (Value) Axis (on the left), change the units to minimum **0** and maximum to **8,000** displayed **Fixed** at major units of **2,000** and change the Number formatting to **Currency** with no decimal places.
12. Format the Secondary Vertical (Value) Axis (on the right) with the units to minimum **0** and maximum to **30,000** displayed **Fixed** at major units of **5,000** and change the Number formatting to **Currency** with no decimal places.
13. Move the legend to the bottom of the chart.
14. Expand the width and height of the chart area.
15. Expand the width of the legend so all parts of the legend fit on one line. Apply a light blue fill to the legend area to distinguish it from the slide background.
16. Apply a gradient fill to the columns in each data series. After the first data series has been changed, you will need to reset the fill color for each series selected and then apply the gradient coloring. Choose **Linear Up** in the Dark Variations category so the lightest color is on top.
17. Click outside the chart area to deselect the chart.
18. Now work in the area at the top of the chart to create these graphic elements and then move them into position when complete. You might want to use Zoom to increase the size of the slide so you can work better in detail.
 - a. Create a text box centered above the chart. Key **Impressive!** in the text box. Change the font to 24-point Arial.
 - b. Draw a small, **5-Point Star** with a yellow fill and red outline.
 - c. Place the star on the top of the New York column for the year 2007.
 - d. Place the text box above the columns near the star, as shown in Figure 6-30.

Figure 6-30
Completed chart



19. Create a handout header and footer: Include the date and your name as the header, and the page number and text **[6-26your initials]** as the footer.
20. Move to slide 1 and save the presentation as **[6-26your initials]**.
21. View the presentation as a slide show; then preview and print slide 3 in grayscale.
22. Close the presentation.

Exercise 6-27 ♦ Challenge Yourself

Insert a chart; change the chart style; apply gridlines; format the chart text, data series, and legend; add a picture fill to a chart; and add a shape.

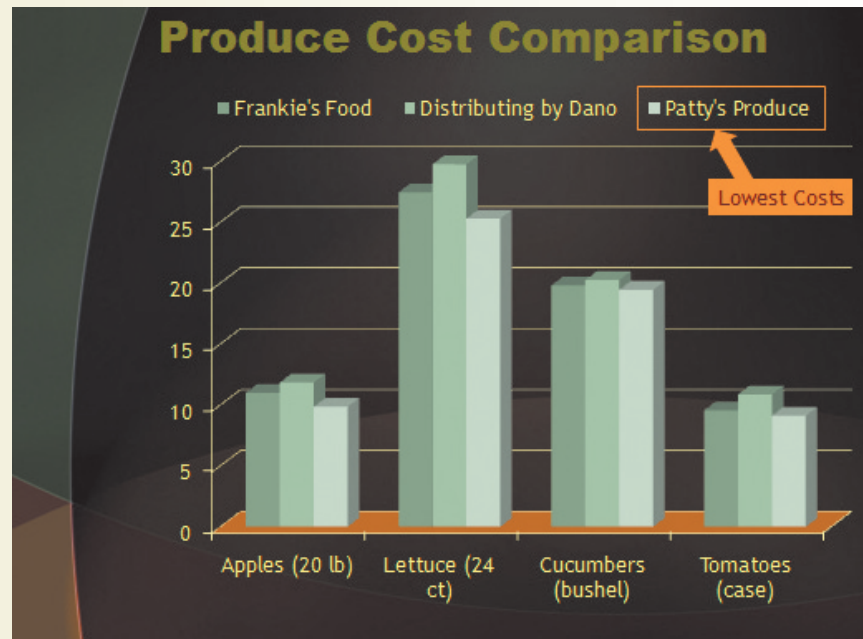
1. Open the file **Suppliers**.
2. On slide 1, key **Your Name** as the subtitle.
3. Insert a new slide after slide 2 that uses the **Title and Content** layout. For the slide title, key **Produce Cost Comparison**.
4. Create a **3-D Clustered Column** chart on the new slide by using the data in Figure 6-31. On your worksheet in Microsoft Excel, select all of the cells for the chart, then from the Home tab, in the Cells group, click Format and choose **AutoFit Column Width** so all text is visible in the cells.

Figure 6-31
Worksheet

	A	B	C	D	E
1		Frankie's Food	Distributing by Dano	Patty's Produce	
2	Apples (20 lb)	10.99	11.84	9.85	
3	Lettuce (24 ct)	27.45	29.75	25.29	
4	Cucumbers (bushel)	19.8	20.25	19.45	
5	Tomatoes (case)	9.55	10.85	9.12	
6					
7					

5. Change the chart style to **Style 7**.
6. Change the **Floor** color to the orange that matches the slide design.
7. Select the legend and change to a **Top** position.
8. Deselect the chart. Draw a rectangle shape over “Patty’s Produce” in the legend area then change the Fill color to **None** and the outline to **Orange**.
9. Add a text box on the right and key **Lowest Costs**. Change the Fill color to **Orange** and the text color to **Dark red** and font size to **18 points**.
10. Add an arrow from the text box pointing to “Patty’s Produce.” Change the Fill color and the Outline color to **Orange**, as shown in Figure 6-32.

Figure 6-32
Completed chart



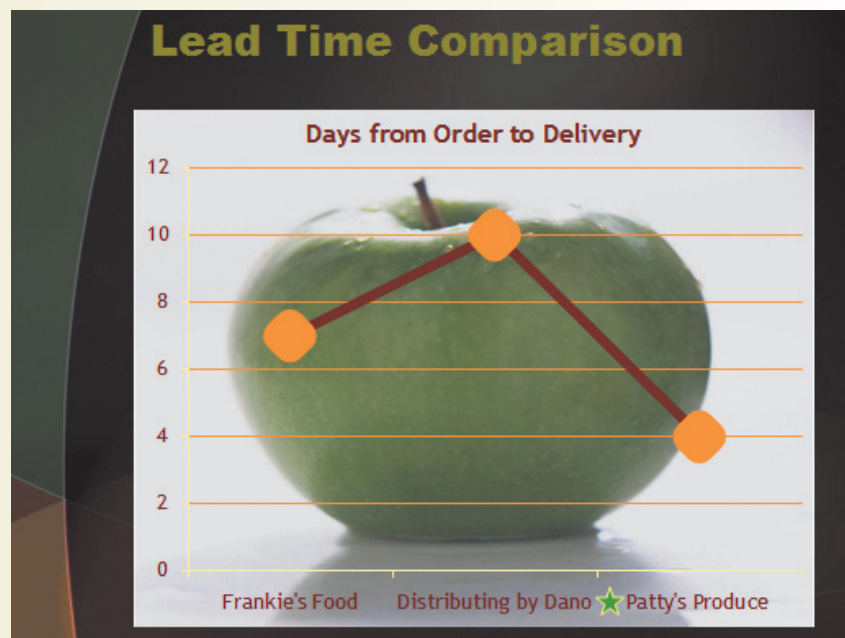
11. Insert a new slide after slide 3 using the **Title and Content** layout. For the slide title, key **Lead Time Comparison**.
12. Insert a **Line with Markers** chart and enter the data below in Figure 6-33 into the chart. Delete columns C and D and row 5.
13. Select the data from A1 through B4 so that the chart appears correctly.

Figure 6-33
Worksheet

	A	B
1		Days from Order to Delivery
2	Frankie's Food	7
3	Distributing by Dano	10
4	Patty's Produce	4
5		

14. Remove the legend. If the chart title did not automatically appear, title the chart **Days from Order to Delivery**.
15. Increase the width of the line to 8 points and make it **Dark red, Accent 2**. Change the Marker Options to **Built-in** and increase the marker size to 28 points and make it **Orange**.
16. Reposition the chart to fit evenly on the dark area of the slide.
17. Draw a green, **5-pointed star** and place it in front of the supplier's name with the lowest lead time.
18. Change the font color of the Value and Category Axes and the chart title to **Dark red, Accent 2**.
19. Insert the picture **Apple** from your data files into the background of the chart.
20. Change the gridline color to orange, as shown in Figure 6-34.

Figure 6-34
Completed chart



21. Create a handout header and footer: Include the date and your name as the header, and the page number and the text **[6-27your initials]** as the footer.
22. Move to slide 1 and save the presentation as **[6-27your initials]**.
23. View the presentation as a slide show; then preview and print it as handouts, four slides per page, grayscale, landscape, framed. Close the presentation.

On Your Own

In these exercises you work on your own, as you would in a real-life work environment. Use the skills you've learned to accomplish the task—and be creative.

Exercise 6-28

Obtain a list of stock quotes either online or from the *Wall Street Journal*. Create a chart listing at least five of your stock picks. Compare the prices of each stock visually through a chart. Create another chart showing the percentage change in stock value since closing the day before compared with the other stocks you have chosen. In addition, create a separate slide for each stock, giving details about the company. Format the presentation in a way that will hold a viewer's attention. Save your presentation as **[6-28your initials]**. Preview, and then print the presentation as handouts.

Exercise 6-29

Make a list of your activities during a typical weekday, including the actual time you spend on each activity. Group your activities into no more than eight categories. Make sure the times add up to 24 hours. Add a second set of times listing the amount of time you should be spending on each activity, and a third set of times listing the amount of time you would prefer to spend. (Don't be too serious about the times—make it fun.) Create a column or bar chart to represent these times, and then add three pie chart slides, one for each set of times (actual, should, prefer). Add a title slide and a conclusion slide. Use your creativity to make the charts interesting and fun to view including colors, pictures, shapes, and 3-D rotation. Save the presentation as **[6-29your initials]**. Preview, and then print the presentation as handouts.

Exercise 6-30

Research the information about your state of residence from the current census and other online resources. Prepare slides to explain the facts that you find using bulleted lists and charts. Find some statistics about diversity within your state, home ownership in your state compared to the national average, types of businesses, etc., and create at least two charts to display the statistics. Add a title slide and a conclusion slide. Format your presentation attractively, save it as **[6-30your initials]**, and then print handouts.