

P2W Skills for Success

Activity Set 24: Graphs Part 3



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24.1: Line Graphs

What do line graphs show?

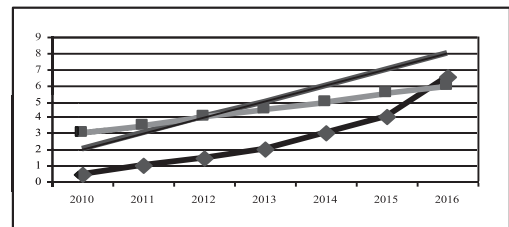
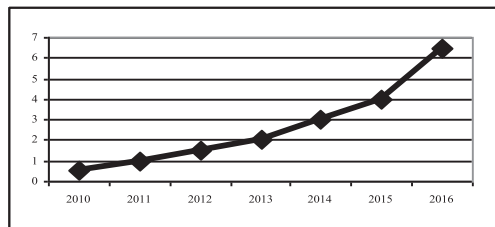
In line graphs, lines are used to connect individual points that represent quantities. They are an effective way to present changes over time. The shape and direction of lines show how quantities change. Quantities displayed may be anything that can be counted, such as money, products or people.

How are line graphs used?

Line graphs are used in many different sectors to show how quantities change over time. In manufacturing, they may show production numbers over a month. In health settings, they may show how many patients are registered over the course of a day. Line graphs can help workers estimate values between data points and make predictions about values beyond the time displayed.

What do line graphs look like?

Line graphs typically use lines that extend horizontally. The x-axis (side to side) usually displays units of time. The y-axis (up-and-down axis) usually marks whatever is being measured. More than one quantity may be displayed on the same graph, presented as multiple lines on a single graph.



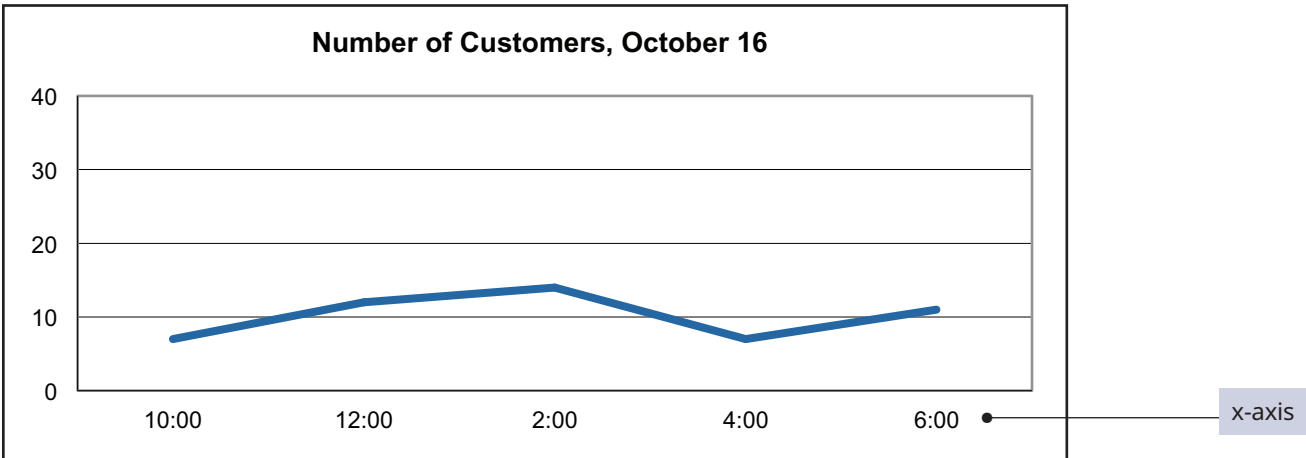
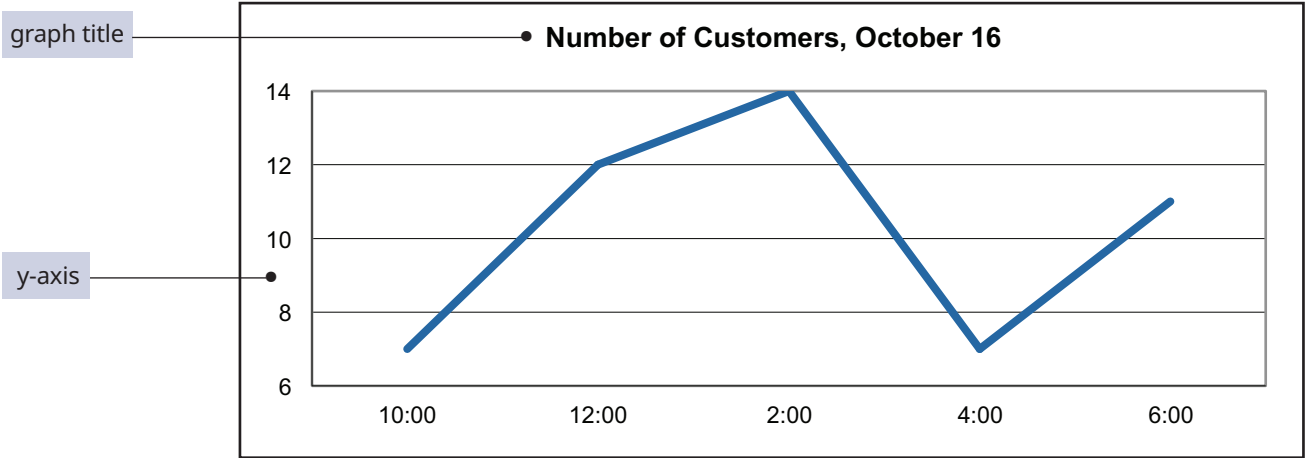
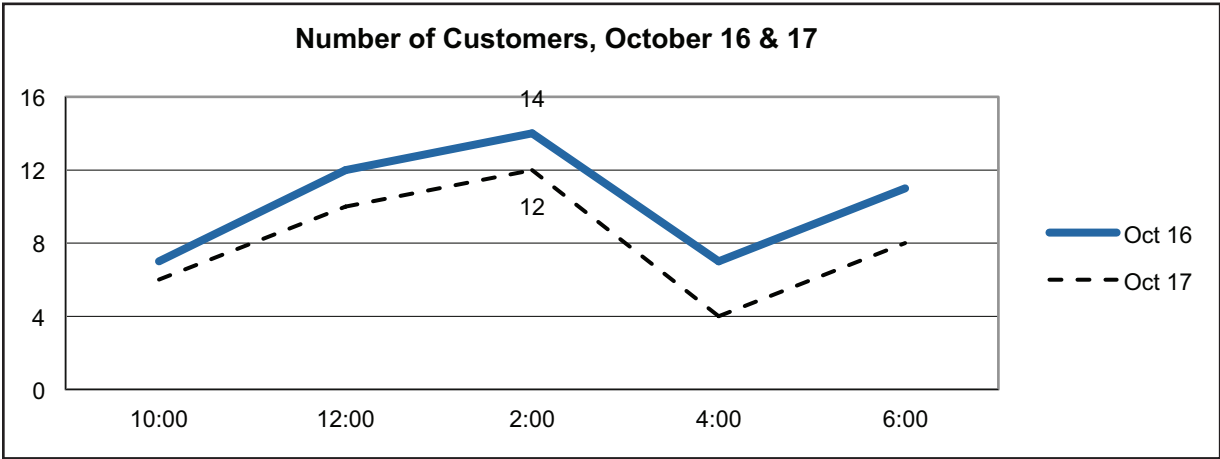
How do you read line graphs?

To read a line graph, you must first understand what is being represented. Here are some steps to follow to help you interpret line graphs:

1. Scan the graph to identify the title.
2. Locate the x-axis and y-axis. The x-axis is horizontal (side to side) and usually displays time intervals. The y-axis is vertical (up and down) and usually displays quantities.
3. Locate the legend to identify categories or subcategories for the graph.
4. Identify any additional information, such as data labels, found on the graph.

24.1: Line Graphs

Below are examples of line graphs for a retail outlet. Follow the steps on the next page to interpret the graphs.



24.1: Line Graphs

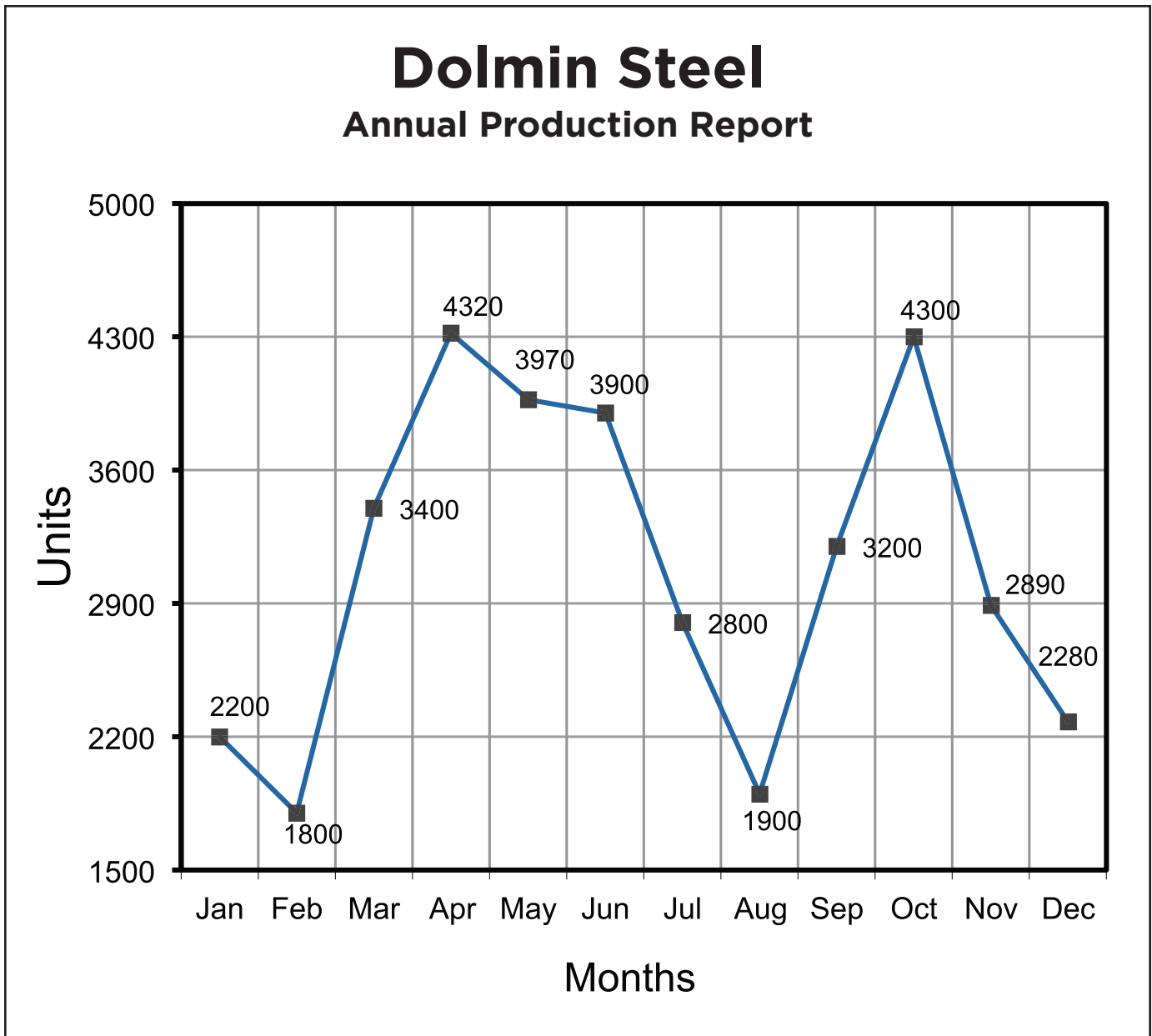
Follow the steps below to interpret the top graph on the previous page, then answer the questions below.

STEPS	TRY IT OUT
Step 1. Scan the top graph to identify the title.	→ What is the title of this graph?
Step 2. Locate the x-axis and y-axis. The x-axis is horizontal and the y-axis is vertical.	→ What does the x-axis display? What does the y-axis display?
Step 3. Locate the legend to identify the categories or subcategories for the top graph.	→ Does this line graph have a legend?
Step 4. Identify any additional information, such as data labels, found on the top graph.	→ What additional information, if any, does this line graph display?

- Using your own words, summarize what the top line graph displays. Try to keep your description brief.

- The three graphs show the same information. Compare them to figure out why they look different from each other.

24.2: Line Graph Practice



24.2: Line Graph Practice

(page 2 of 2)

Interpret the graph on the previous page, then answer the questions below.

1. Which two months recorded the highest production rates?

2. Which month recorded production of 1,900 units?

3. Which three-month period experienced the greatest increase in production?

4. Calculate the difference in units produced between September and October.

5. Write two ways a production supervisor could use the information displayed on this graph.

a.

b.

24.3: Creating Line Graphs

1. Check the box that describes what you can do using Excel.

Tasks	Yes	A bit	No
a) Create a line graph in Excel			
b) Change the formatting of a line graph			
c) Add a title to a line graph			

2. Need to learn more?



Yes, please!

Ask your instructor to help you learn or review these skills.



No, I'm good.

Use Excel to create a line graph.

1. Create a workbook.
2. Enter the sales data below into a spreadsheet.
3. Highlight the data and create a line graph.
4. Add a title to the graph.
5. Save the workbook in a folder on the computer.

Monthly sales	
Jan	\$80,400
Feb	\$70,800
Mar	\$95,800
Apr	\$100,700
May	\$110,900

24.4: Presentation

Follow the instructions below to prepare and deliver a presentation to the class. Work with a partner or small group.

1. Choose a topic to research about which there is numerical data that can be displayed in bar, circle and/or line graphs. Here are some examples:
 - Household expenses
 - Physical fitness
 - Leisure time activities
 - Weather
 - Accident or injury rates
 - Eating habits
2. Refer to **5.2: Search Techniques** to do online research. Collect data on your topic that can be displayed in bar, circle and/or line graphs. Here is an example:

Topic: Weather

Data that can be displayed in a bar graph: Amount of precipitation in different cities

Data that can be displayed in a line graph: Temperature trends over time in one or more cities
3. Create at least two different graphs to display the data you collect.
4. Prepare a presentation that is five to ten minutes long. Your presentation should include these components:
 - ✓ Begin with an introduction about your topic.
 - ✓ Explain where you found the data for the presentation.
 - ✓ Identify why you think the data you found is accurate and current.
 - ✓ Present the data displayed in the graphs.
 - ✓ Point out notable information, such as highs, lows and/or trends.
5. Deliver your presentation to the rest of class.