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With Features From





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Gary E. Clayton teaches economics at Northern Kentucky University in Highland Heights, Kentucky. Dr. Clayton received his Ph.D. in economics from the University of Utah, has taught economics and finance at several universities, and has authored textbooks, including several at the college level, as well as a number of articles in various educational, professional, and technical journals.

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Dr. Clayton has a long-standing interest in economic education. He has participated in and directed numerous economic education workshops. He received the Outstanding Citizen Certificate of Recognition from the state of Arkansas for his work in economic education. He has served as vice president for the Kentucky Council on Economic Education and received the state's highest honor when he received a commission as an honorary Kentucky colonel. More recently, Dr. Clayton was the year 2000 Leavey Awards Winner for Excellence in Private Enterprise Education, which is presented annually by the Freedoms Foundation, in Valley Forge, Pennsylvania. During the summer months he participates in various study-abroad programs that take college students to Europe.

BusinessWeek

Business Week is the most widely read business publica-

tion in the world and is the only weekly business news publication in existence. Business Week provides incisive and comprehensive interpretations of events by evaluating the news and its implications for the United States, regional, and world economies. Business Week offers writing that is informative and often inspiring to uncover what is crucial to understanding the economy—today as well as tomorrow's. Business Week features in Economics: Principles and Practices are a tool that enables students to see real-world economics in action.



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Using Line Graphs

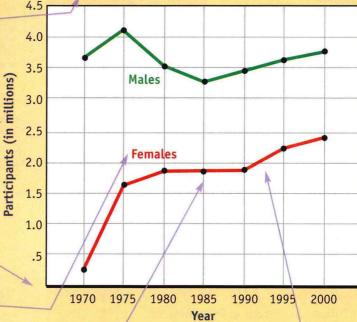
A graph, like a picture, may present information in a more concise way than words. Line graphs are drawings that compare numerical values. They often are used to compare changes over time or differences between places, groups of items, or other related events.



Follow these steps to learn how to understand and use line graphs. Then answer the questions below.

- Read the title of the graph.
 This should tell you what to expect or look for.
- 2. Note the information on the left side of the graph—the vertical axis. The information being compared usually appears on this axis.
 - **3.** Note the information along the bottom of the graph—the horizontal axis. Time often appears along this axis.
 - 4. Determine what the line(s) or curve(s) symbolizes.
 - **5.** Select a point on the line, then note the date below this point on the horizontal axis and the quantity measured on the vertical axis.

Participation in High School Athletic Programs



6. Analyze the movement of the line (whether increasing or decreasing over time) or compare lines (if more than one are on the graph) to determine the point being made.

PRACTICING THE SKILL

- 1. About how many males participated in high school athletic programs in 1970? In 1997?
- 2. About how many females participated in high school athletic programs in 1970? In 1997?

- 1. What trends are shown on the graph?
- 2. How do you think these trends affected the manufacture and sale of sports-related products from the early to late 1990s?

Using Bar Graphs

LEARNING THE SKILL

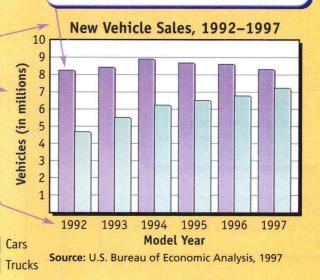
Follow these steps to learn how to understand and use bar graphs.

- 1. Read the title and labels. They tell you the topic, what is being compared, and how it is counted or measured.
 - **3.** Analyze the change over time or compare bars to determine the point being made.

PRACTICING THE SKILL

- 1. What year had the highest new car sales?
- 2. About how many trucks sold in 1997?

2. Examine a bar on the graph. Note the date below the bar on the horizontal axis and the quantity measured on the vertical axis.



Using Circle Graphs

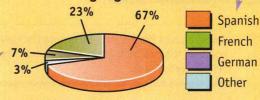
LEARNING THE SKILL

Follow these steps to learn how to understand and use circle graphs.

- 1. Examine the title to determine the subject.
 - Compare the relative sizes of the circle segments, thus analyzing the relationship of the parts to the whole.

2. Read the legend to see what each segment represents.

High School Student Foreign Language Enrollment



Source: Statistical Abstract of the United States, 1998

PRACTICING THE SKILL

- 1. What percent of foreign language students are studying German?
- **2.** What foreign language has the greatest student enrollment?

- 1. Using the bar graph, what projection could you make about the future of new car sales?
- **2.** Based on the circle graph, which foreign language text-books probably have the greatest sales volume?

Using Tables and Charts

Tables and charts are often used to show comparisons between similar categories of information. Tables usually compare statistical or numerical data. Tabular data is presented in columns and rows. Charts often show a wider variety of information than tables.

LEARNING THE SKILL

Follow these steps to learn how to understand and use tables. Then answer the questions below.

- Read the title of the table to learn what content is being presented.
- Read the headings in the top row. They define the groups or categories of information to be compared.
 - Examine the labels in the left-hand column. They describe ranges or subgroups, and are often organized chronologically or alphabetically.

,	Average Earnings of Full-Time Workers by Age and Education, 1996							
Salar Property	Age and Sex	All Workers	Some High School	High School Graduate	Four-Year College Degree			
	Male	\$42,077	\$25,283	\$32,521	\$63,127			
1	18-24	18,856	15,478	18,779	27,257			
	25-34	33,055	19,910	27,349	44,355			
1	35-44	45,840	26,116	35,138	70,035			
The same	45-54	51,705	34,527	39,178	72,461			
1000	55-64	49,916	32,926	38,032	71,070			
	Female	\$28,363	\$17,313	\$21,893	\$41,339			
	18-24	17,002	12,512	15,219	24,980			
1	25-34	26,119	16,826	19,526	34,132			
	35-44	30,879	18,261	23,134	46,923			
	45-54	31,222	18,007	23,833	45,012			
	55-64	27,629	19,039	23,179	41,342			

Source: U.S. Bureau of the Census

4. Note the source of the data. It may tell you about the reliability of the table.

5. Compare the data presented in the other columns. This is the body of the table.

PRACTICING THE SKILL

- What are the average earnings for 25- to 34-year-old women with college degrees?
- 2. What are the average earnings for 18- to 24-year-old males without high school diplomas?

- 1. What age-related trends do you notice?
- **2.** What conclusions could you draw from this data about the economic effect of education on earnings?

Reading Maps

Maps are visual tools that show to scale the relative size and location of specific geographic areas. There are political maps, which show human-made boundaries. There are physical maps, which show physical features of an area. There are also special purpose maps that can show historical change, cultural features, population, climate, land use, or resources. Regardless of type, all maps use symbols to convey information.



PRACTICING THE SKILL

- **1.** What is the primary content shown on this map?
- **2.** Which region of the United States has the heaviest concentration of manufacturing areas?

- 1. How could this map be a helpful reference if you were planning to buy ranch land to raise cattle?
- **2.** What generalizations could you draw from this map about energy resources in the United States?

Understanding Percentages

If you shop, you probably like seeing the word *percent*. Stores often advertise sale prices as a percent of regular price. *Percent* means "parts per hundred." So, 30 percent means the same thing as 30/100 or 0.30. Expressing change as a percentage allows you to analyze the relative size of the change.

LEARNING THE SKILL

Follow these steps to learn how to calculate and use percentages. Then answer the questions below. 2. Find the sale price by subtracting the discount from the regular price.

 Suppose a pair of shoes is on sale for 30 percent off the regular price.
 Calculate the discount by multiplying the original price by the sale percentage. Change percent to a decimal before you multiply. the discount from the regular price

Calculating Percent

Regular price of shoes \$57.00 Regular price \$57.00 \$57.00 30% \times .30 Discount -17.10OR × .70 Discount \$17.10 Sale price \$39.90 \$39.90

- 3. Or, figure the sale price by multiplying the regular price by the percent you will pay. (Subtract the sale percentage from 100 to get the percent you will pay.) Change percent to a decimal before you multiply.
- Calculate an increase in sales by subtracting the quantity sold last year from the quantity sold this year.

Arithmetic Change vs. Percentage Change

Arithmetic change 1.6 billion pounds of butter sold this year

<u>-1.5</u> billion pounds of butter sold last year

.1 billion pounds

Percentage change $\frac{0.1}{1.5} = .067 \times 100 = 6.7$ percent

5. Determine the percentage change by dividing the arithmetic difference by the original quantity. Multiply by 100 to change the decimal to percent.

PRACTICING THE SKILL

- **1.** A store advertises a shirt at 25 percent off the original price of \$44. What is the sale price?
- **2.** What is the percentage increase in high school enrollment from 1,165 students to 1,320?

Applying the Skill to Economics

In 1997 about 32 percent of all music recordings sold were classified as rock music. That year about \$12 billion was spent on all recordings. How much was spent on rock music?

Determining Averages: Mean and Median

The most commonly used summary statistic is the average. There are two ways to compute the average: by using the mean or the median. The *mean* is the average of a series of items. When your teacher computes the class average, he or she is really computing the mean. Sometimes using the mean to interpret statistics is misleading, however. This is especially true if one or two numbers in the series are much higher or lower than the others. The median can be more accurate. The *median* is the midpoint in any series of numbers arranged in order.

LEARNING THE SKILL

Follow these steps to learn how to determine and use averages. Then answer the questions below.

- Suppose you want to find the mean weekly salary for a group of teenagers. First, add all the earnings together.
- **3.** Locate the median by finding the midpoint in the series (\$41). Compare the mean with the median. Determine which is the more useful statistic.

Students' Weekly Earnings
From After-School Jobs

\$ 20
32
34
41
\$420 ÷ 7 = \$60

53
65
175
\$420

2. Divide the sum by the number of students to find the mean.

- Suppose you want to calculate the median for the four highest-paid students. First, arrange the numbers in order.

the series, the median is the mean of the two middle numbers. Follow steps 1 and 2 to find the mean.

5. When an even number of figures is in

PRACTICING THE SKILL

175

- 1. What is the median salary for all seven students?
- 2. What is the median salary for the four lowest-paid students?

Applying the Skill to Economics

Average Monthly Rent:2-Bedroom ApartmentAtlanta, GA\$688Dallas, TX\$ 718Boston, MA\$906San Jose, CA\$1,139

- 1. What is the mean monthly rent for these four cities?
- 2. What is the median monthly rent?

Understanding Nominal and Real Values

The rise in the economy's average price level is called inflation. To make comparisons between the prices of things in the past and those of today, you have to make the distinction between *nominal*, or current, and *real*, or adjusted for inflation, values. You can use the consumer price index (CPI), an index of average prices for consumer goods, to calculate real values. Then you can *accurately* compare changes in income and prices over time.

LEARNING THE SKILL

Follow these steps to learn how to understand and calculate nominal and real values. Then answer the questions below.

4. Determine the percentage increase in real price. Subtract the percentage increase in CPI from the percentage increase in nominal price. Evaluate the sale in real values.

1. Suppose a family sells a house after living there for 10 years. To calculate whether they made any profit from the sale, they need to know the real sale price of their house. First, find the nominal price increase.

Purchase price of house in 1990: \$50,000 Sale price of house in 2000: \$100,000

$$\frac{$100,000}{-50,000}$$
 $\frac{$50,000}{$50,000} = 1 \times 100 = 100\%$

CPI in 1990: 100
CPI in 2000: 200

$$\frac{200}{100} = 1 \times 100 = 100\%$$

$$\frac{100}{100} = 1 \times 100 = 100\%$$

-100%

0%

- 2. Calculate the nominal percentage increase in price. Divide the amount of increase by the original price and multiply by 100 to express the answer as a percent.
- 5. Suppose that last year you earned \$10 per hour. You receive a 5 percent raise. The CPI is 3 percent higher than last year's CPI, which means there is a 3 percent inflation rate.

Earnings: \$10 per hour Raise: 5%
Inflation Rate: 3%
5%
-3%
2%

- Determine the percentage increase in the consumer price index. First find the actual change in CPI. Then divide the amount of increase by the original CPI and multiply by 100.
- Calculate the real salary increase by subtracting the inflation rate from the nominal raise.

PRACTICING THE SKILL

- **1.** What was the nominal price increase on the sale of the house?
- 2. How much money, in real dollars, was made on the house?
- **3.** How much was the real value of the raise?

Applying the Skill to Economics

Between 1980 and 1997, the amount spent on advertising in the United States increased by 240 percent. How could you adjust this figure for inflation?

Understanding Interest Rates

When you deposit money in a savings account, the bank pays you interest for the use of your money. The amount of interest is expressed as a percent, such as 6 percent, for a time period, such as per year. Two types of interest exist: simple and compound. *Simple interest* is figured only on the principal, or original deposit, not on any interest earned. *Compound interest* is paid on the principal plus any interest that has been earned. Over time, there is a significant difference in earnings between simple and compound interest.

LEARNING THE SKILL

Follow these steps to learn how to understand and calculate interest rates. Then answer the questions below.

- 1. Suppose you deposit \$100 in a savings account that earns 6 percent simple interest per year. Get ready to figure your earnings by converting 6 percent to a decimal.
- 2. To calculate the simple interest earned, multiply the principal by the interest rate.

3. Calculate the account balance for the first two years, assuming the bank pays the same interest rate each year. Add the principal, the first year's interest, and the second year's interest.

- 4. Suppose you deposit \$100 in a savings account that earns 6 percent compound interest per year. Calculate the interest earned the first year.
- Determine the interest earned in the second year. Multiply the new balance by the interest rate.

 \$ 100
 \$100
 \$ 106
 \$106.00

 \$.06
 + 6
 \$.06
 + 6.36

 \$ 6.00
 \$ 106
 \$ 106.36
 \$ 112.36

Find the bank balance for the end of the first year. Add the principal and first year's interest. Figure the total bank balance after two years. Add the second year's interest to the first year's balance.

PRACTICING THE SKILL

- 1. What would be the difference in earnings between simple and compound interest if your initial balance was \$1,000 rather than \$100?
- 2. What would be the difference in earnings between simple and compound interest on your \$100 savings after five years?

- 1. What would be the impact of compounding interest on a daily basis rather than an annual basis?
- Banks often pay higher rates of interest on money you agree to keep in the bank for longer periods of time. Explain why this might be.

Reading the Financial Page

A stock market report alphabetically lists stocks and provides information about stock prices and trades. Every business day, shares of stock are bought and sold. At the beginning of each trading day, stocks open at the same prices they closed at the day before. Prices generally go up and down throughout the day as the conditions of supply and demand change. At the end of the day, each stock's closing price is recorded.

LEARNING THE SKILL

Follow these steps to learn how to understand and use the financial page. Then answer the questions below.

- Locate the stock in the alphabetical list. Names are abbreviated.
- Note the ticker symbol, or computer code, for the stock.
- 5. Review the yield. The yield is the return on investment per share of stock. It is calculated by dividing the dividend by the closing price.
- 7. Note the volume, or number of shares of stock, traded that day. The number given represents hundreds of shares.
- 9. Examine how the day's closing stock price compares with the prior business day's closing price. Positive numbers indicate a price increase. Negative numbers mean a price drop.

Stock Quotations							\			
52 W Hi	leeks Lo	Stock	Sym Div	Yld %	PE	Vol 100s /	Hi	Lo	Close	Net Chg
94.15	29.25	TxInstr	TXN .17	.2	57	39008	(80.80	77.55	79.60	+1.5
59.50	41	TexPacTr	TPL / .40	.9	1 28	23	44.25	43.85	44.25	+ .15
48	35.50	TX Util	TXU / 2.30	6.2	/ 13	17307	37.20	36.45	36.80	15

- 2. Examine the stock's history over the last 52 weeks. The high and low prices for one share of stock appear.
- 4. Evaluate the annual dividend. Stockholders receive this dividend, or payment, for each share of stock they own.
- **6.** Read the price/earnings ratio. Lower price/earnings ratios generally mean more earnings per share.
- **8.** Examine the day's high, low, and closing stock price.

PRACTICING THE SKILL

- 1. How many shares of Texas Instruments stock were traded on the day shown?
- **2.** What was the day's highest price for a share of Texas Utilities stock?
- **3.** Which stock had the greatest increase in closing price from the previous day?

Applying the Skill to Economics

If you had purchased 100 shares of Texas Instruments stock at its lowest 52-week price and sold it at this day's closing price, how much money would you earn?

Reading for Information

Think about your textbook as a tool that helps you learn more about the world around you. It is an example of nonfiction writing—it describes real-life events, people, ideas, and places. Here is a menu of reading strategies that will help you become a better textbook reader. As you come to passages in your textbook that you don't understand, refer to these reading strategies for help.

VBEFORE YOU READ

Set a Purpose

- Why are you reading the textbook?
- How does the subject relate to your life?
- How might you be able to use what you learn in your own life?

Preview

- Read the chapter title to find what the topic will be.
- Read the subtitles to see what you will learn about the topic.
- Skim the photos, charts, graphs, or maps. How do they support the topic?
- Look for vocabulary words that are boldfaced. How are they defined?

Draw From Your Own Background

 What have you read or heard about concerning new information on the topic?

 How is the new information different from what you already know?

 How will the information that you already know help you understand the new information?

AS YOU READ

Question

- What is the main idea?
- How do the photos, charts, graphs, and maps support the main idea?

Connect

- Think about people, places, and events in your own life. Are there any similarities with those in your textbook?
- Can you relate the textbook information to other areas of your life?

Predict

- Predict events or outcomes by using clues and information that you already know.
- Change your predictions as you read and gather new information.

Visualize

- Pay careful attention to details and descriptions.
- Create graphic organizers to show relationships that you find in the information.

AS YOU READ

Comparison-and-Contrast Sentences:

Look for clue words and phrases that signal comparison, such as *similarly*, *just as, both, in common, also,* and *too.*

Look for clue words and phrases that signal contrast, such as on the other hand, in contrast to, however, different, instead of, rather than, but, and unlike.

Cause-and-Effect Sentences:

Look for clue words and phrases such as because, as a result, therefore, that is why, since, so, for this reason, and consequently.

Chronological Sentences:

Look for clue words and phrases such as after, before, first, next, last, during, finally, earlier, later, since, and then.

AFTER YOU READ

Summarize

- Describe the main idea and how the details support it.
- Use your own words to explain what you have read.

Assess

- What was the main idea?
- Did the text clearly support the main idea?
- Did you learn anything new from the material?
- Can you use this new information in other school subjects or at home?
- What other sources could you use to find more information about the topic?

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