Statistics Meant to Astound the Reader

Lesson 1-6

DATE TIME

Math Message

Americans Consume 100 Acres of Pizza per Day!

Each day we eat the equivalent of 100 football fields covered with pizza!

The National Association of Pizza Operators reported today that

The writer of this headline wants us to think this is a lot. Let's look at this statistic more closely.

- There are 43,560 ft² in an acre, so 100 acres is about 4,350,000 ft².

  *100 * 43,560 = 4,356,000*
  Round to 4,350,000.

- If Americans eat that much pizza each day for 365 days, that is about 1,588,000,000 ft² per year.

  *4,350,000 * 365 = 1,587,750,000*
  Round to 1,588,000,000.

- If that much pizza per year is divided by about 310,000,000 people in the United States, then each person on average eats about 5 ft² of pizza in one year.

  1,588,000,000 / 310,000,000 ≈ 5.123
  Round to 5.

If the average pizza is about 1 ft², then each American eats about 5 pizzas per year. Here is a new headline based on the information above.

An Average American Eats 5 Pizzas per Year!

The National Association of Pizza Operators reported today that

Study the headline below.

An Average American Takes about 100,000 Automobile Trips in a Lifetime!

1,282 trips/yr
107 trips/mo
3.5 trips/day

Write a new headline that gives the same information but will not astound the reader. Use the fact that the average American lives to be about 78 years old.

Analyzing Persuasive Graphs

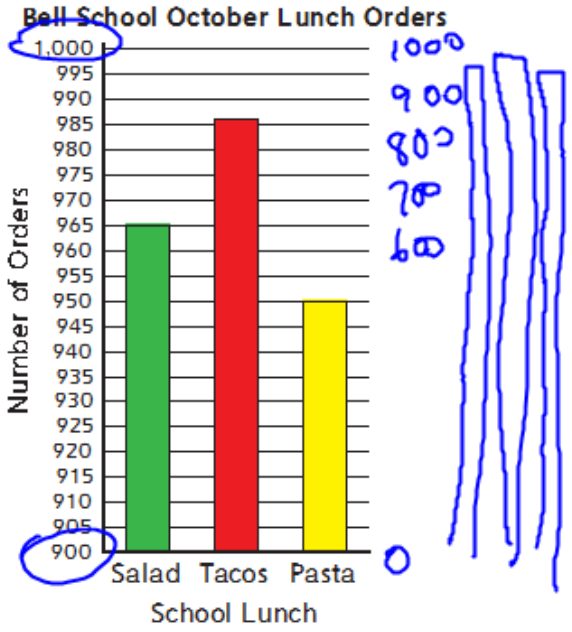
Lesson 1-6

DATE TIME

Analyze the graphs. Each graph was designed to persuade the reader to interpret the data presented in a particular way.

1

October Lunch Orders	
Lunch	Number of Lunch Orders
Salad	965
Tacos	986
Pasta	950



John wrote an article for the Bell School newspaper about school lunches. He made the graph at the right to show the October lunch orders. The headline of his article was "Bell Students Go Loco for Tacos."

Is the table data the same as the graph? _____

How did John design his graph to make it support the headline?

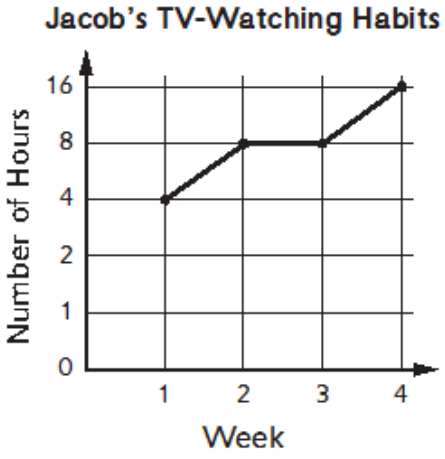
_____

_____

_____

2 Jacob created the graph at the right to try to convince his parents that his TV-watching habit was relatively stable during the past month.

Jacob's parents might agree with him, until they notice something about his graph. What might change their minds?



_____

_____

_____

_____

_____

Analyzing Persuasive Graphs (continued)

Lesson 1-6

DATE TIME

3 A pictograph uses pictures to represent data and relationships.

Compare the numbers of medals won by each country.

How are the relationships among the numbers represented in this pictograph misleading?

Top 4 Olympic Medal Winners

4 List some strategies for carefully reading persuasive graphs.

Making Persuasive Graphs

Lesson 1-6

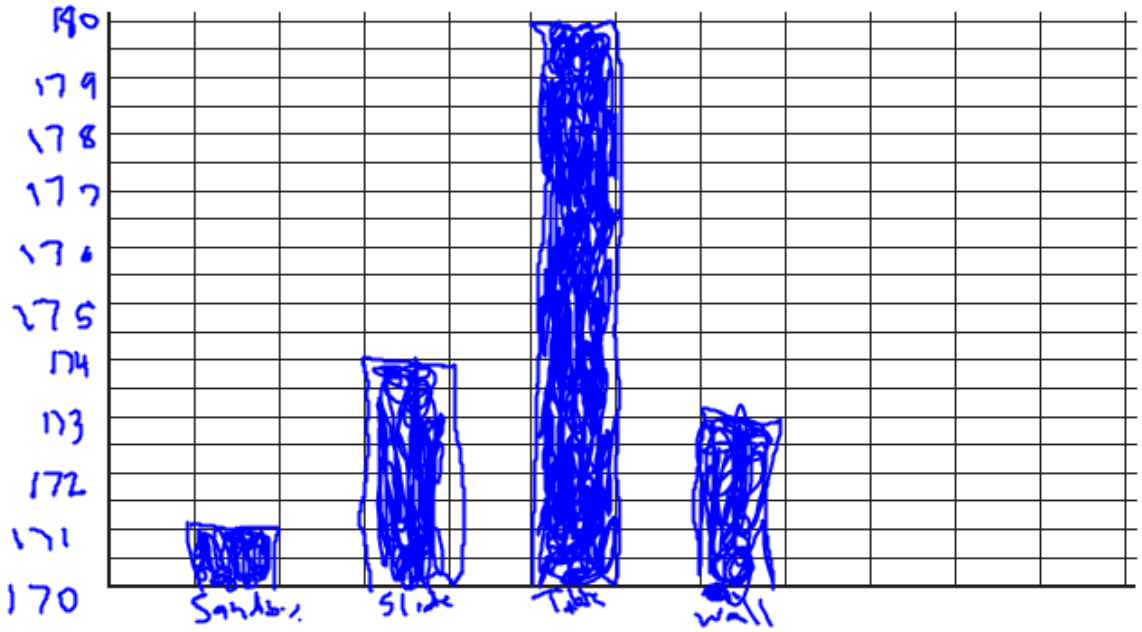
DATE TIME

Bell School has money to buy one new piece of equipment for their playground. The sixth graders conducted a survey to find out what students at each grade want. The survey data is summarized in this table.

Grade	Sandbox	Slide	Picnic Tables	Climbing Wall	Total Votes
K	84	20	2	1	107
1	65	40	3	2	110
2	20	55	15	8	98
3	2	29	25	35	91
4	0	20	15	78	113
5	0	10	39	39	88
6	0	0	81	10	91
Total	171	174	180	173	698

1. What piece of equipment do most sixth graders want the school to buy? _____

2. Design a graph that persuades the principal to buy the picnic tables. Make sure the graph accounts for votes from every grade and includes a title and labels.



Fraction Addition and Subtraction

Lesson 1-6

DATE TIME

SRB 179-183

Solve.

1. $\frac{2}{5} + \underline{\frac{2}{5}} = \frac{4}{5}$

2. $\underline{\quad} - \frac{2}{9} = \frac{5}{9}$

3. $5 - \frac{3}{4} = \underline{4\frac{1}{4}}$

4. $1\frac{7}{8} - \underline{\quad} = \frac{5}{8}$

5. $\frac{9}{10} + \underline{\quad} = 1\frac{3}{10}$

6. $3\frac{1}{4} - 2\frac{3}{4} = \underline{\quad}$

7. $\underline{\quad} + 1\frac{3}{4} = 9$

8. $\frac{4}{9} - \frac{1}{3} = \underline{\quad}$

9. Ms. Lee is at the farmer's market. She buys $6\frac{7}{8}$ pounds of Granny Smith apples. Next she buys $3\frac{3}{8}$ pounds of McIntosh apples.

   How many total pounds of apples did Ms. Lee buy? _____

   She needs $10\frac{1}{2}$ pounds. How much more does she need to buy? _____

10. Mr. Ventrelli is making bread. He adds $1\frac{1}{4}$ cups of white flour and $1\frac{1}{4}$ cups of wheat flour. The recipe calls for the same number of cups of water as cups of flour.

    How much water should Mr. Ventrelli add? _____

11. Tim walked $\frac{1}{2}$ mile from school to the park. Then he walked $\frac{1}{4}$ mile to the store to get milk and orange juice. These items cost $2\frac{1}{2}$ dollars. Then he walked another $\frac{3}{4}$ mile to go home.

    How far did Tim walk in all? _____


PI 24
SL1.6

Math Boxes

Lesson 1-6

DATE TIME

Math Boxes

1 Write a number sentence to show how you can estimate each sum.

a. 789 + 23

_____

b. 5,009 + 4,935

_____

SRB 113-114

2 Which of the following are statistical questions? Check all that apply.

- ☐ How long does it take you to run 100 meters if you run your fastest?
- ☐ How many days of below-freezing temperatures does Chicago usually have in a year?
- ☐ How many hours per week does a typical sixth grader spend playing outside?
- ☐ How many boys and girls are enrolled at your school?

SRB 280

3 In one week, 6 cashiers at Buy and Fly worked the following number of hours:

20, 20, 29, 48, 52, 56

A person wants to work at least 35 hours per week. Would the mean or the median number of hours be more likely to encourage the person to apply for a job at Buy and Fly?

_____

SRB 289-290

4 Fill in the circle to tell whether the number sentence is true or false.

A. $\frac{1}{2} + \frac{3}{2} = \frac{4}{4}$ ◯ True ◯ False

B. $\frac{7}{8} - \frac{2}{8} = \frac{5}{8}$ ◯ True ◯ False

C. $\frac{5}{8} = \frac{3}{4} + \frac{2}{4}$ ◯ True ◯ False

D. $\frac{1}{10} = \frac{9}{10} - \frac{8}{10}$ ◯ True ◯ False

SRB 179

5 **Writing/Reasoning** Explain why you chose your answer for Problem 3.

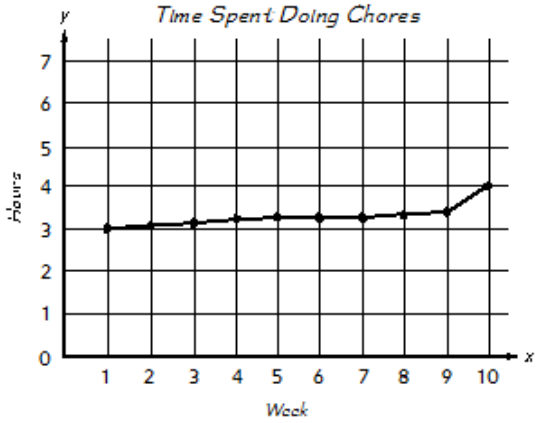
Analyzing Persuasive Graphs

Home Link 1-6

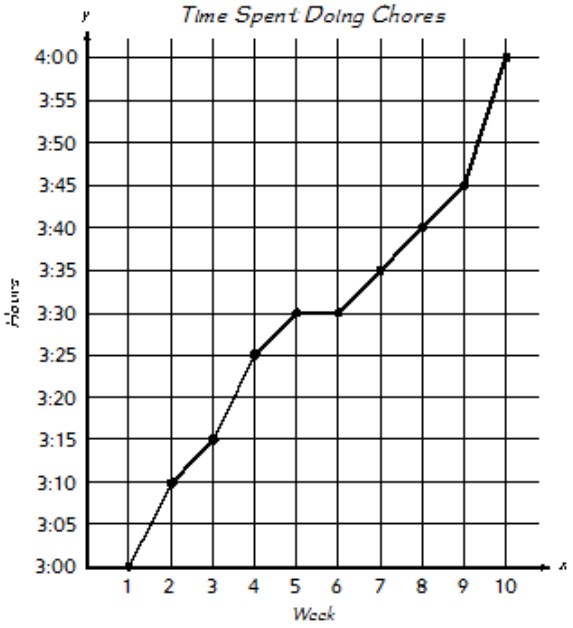
NAME DATE TIME

You are trying to convince your parents that you deserve an increase in your weekly allowance. You claim that during the past 10 weeks, the time you have spent doing jobs around the house (such as emptying the trash, mowing the lawn, and cleaning up after dinner) has increased. You have decided to present this information to your parents in the form of a graph. You have made two versions of the graph and need to decide which one to use.

SRB 308



Graph A



Graph B

1. How are Graph A and Graph B similar?

2. How are Graph A and Graph B different?

3. Which graph, A or B, do you think will help you more as you try to convince your parents that you deserve a raise in your allowance? Why?

Analyzing Persuasive Graphs (continued)

Home Link 1-6

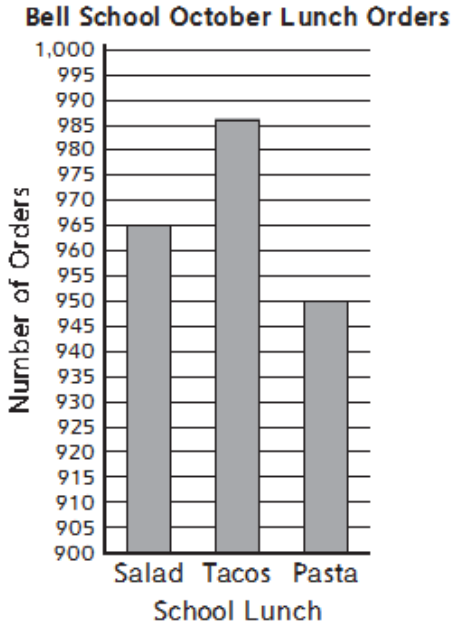
NAME DATE TIME

④ For the graph, describe what you plan to correct. Redraw the graph to give a more accurate picture of the data.

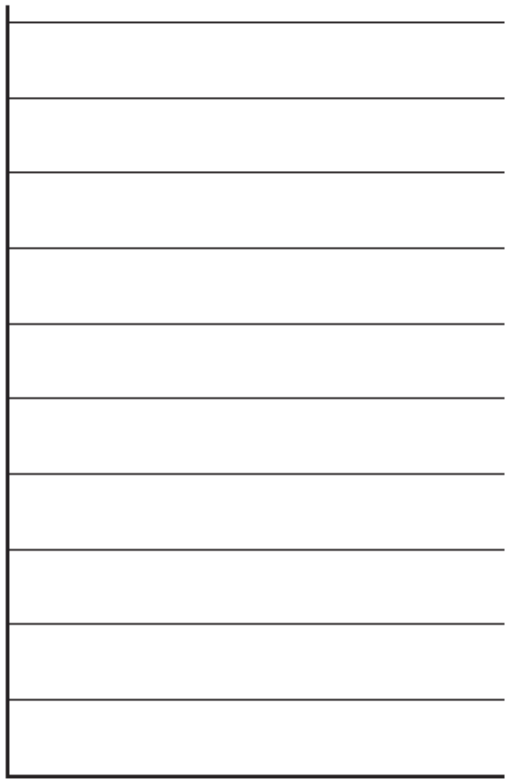
SRB 308

Correction(s): _____

Original Graph



My Corrected Version



Describe how your corrections changed what you see in the graph.

_____

_____

Practice

Solve.

⑤ $\frac{1}{12} + \frac{7}{12} =$ ____ ⑥ $\frac{3}{10} + \frac{7}{10} =$ ____ ⑦ $\frac{1}{8} + \frac{3}{8} =$ ____ ⑧ $1\frac{1}{2} + \frac{1}{2} =$ ____