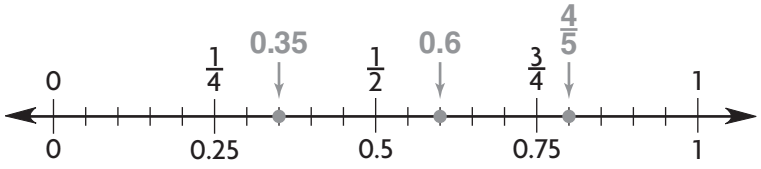
Name _____

Compare Fractions and Decimals

Locate each number on a number line.
Then complete the sentence.

1. $0.6, \frac{4}{5}, 0.35$



The number with the greatest value is $\frac{4}{5}$.

2. $3\frac{1}{4}, 3.45, 3\frac{1}{3}$

The number with the greatest value is _____.

3. $2\frac{4}{5}, 2.65, 2\frac{3}{4}$

The number with the least value is _____.

4. $4\frac{1}{2}, 4\frac{1}{6}, 4.85$

The number with the greatest value is _____.

5. $3.45, 3\frac{2}{5}, 3\frac{2}{3}$

The number with the least value is _____.

Problem Solving Real World

6. Leonardo correctly answered 0.8 of the questions on his math exam. Liam correctly answered $\frac{9}{10}$ of the questions. Keira correctly answered $\frac{3}{4}$ of the questions. Who correctly answered the greatest number of questions?

_____

7. Lana bought 1.25 pounds of ground beef at the market. Jada bought $1\frac{2}{5}$ pounds of ground beef. Willow bought 1.8 pounds of ground beef. Which person bought the least amount of ground beef?

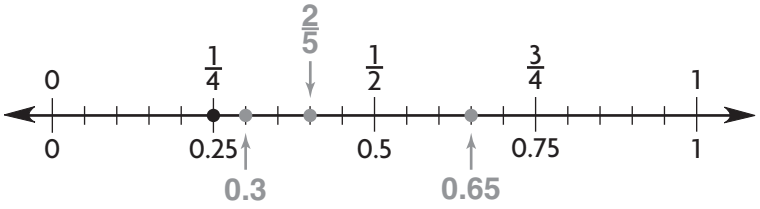
_____

Name _____

Order Fractions and Decimals

For 1–2, locate each number on a number line. Then write the numbers in order from least to greatest.

1. $0.3, \frac{1}{4}, \frac{2}{5}, 0.65$



$\frac{1}{4}, 0.3, \frac{2}{5}, 0.65$

2. $8\frac{1}{5}, 8.5, 8\frac{4}{5}, 8.44$

For 3–6, locate each number on a number line. Then write the numbers in order from greatest to least.

3. $\frac{7}{10}, 0.888, \frac{3}{5}, 0.27$

4. $7\frac{9}{10}, 8.04, 7\frac{1}{6}, 7.85$

5. $4.33, 5\frac{2}{5}, 5.8, 4\frac{1}{4}$

6. $\frac{5}{8}, 0.67, 1.2, \frac{3}{5}$

Problem Solving Real World

7. Judges in a diving competition gave scores of 9.3, $9\frac{1}{2}, 9\frac{4}{5}$, 9.95, and $9\frac{1}{4}$. Which two scores were closest to one another? Explain.

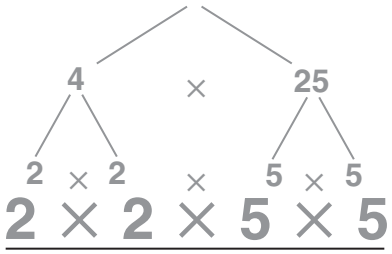
8. In gym class, you run one mile. You finish in $8\frac{9}{10}$ minutes. Ina finishes in 8.45 minutes. Davis finishes in $8\frac{1}{3}$ minutes. Order the finishing times from shortest to longest time.

Name _____

Factor Trees

Use a factor tree to find prime factors.

1. 100



2. 42

_____

3. 54

_____

4. 56

_____

5. 60

_____

6. 90

_____

7. 120

_____

8. 175

_____

9. 300

_____

Problem Solving Real World

10. What is the least number that has 4 odd factors that are all the same? Each factor is greater than 1, and can have only 1 and itself as factors. **Explain** how you found the number.

_____

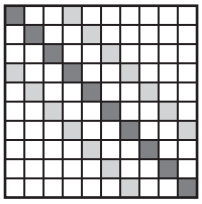
_____

_____

Name _____

Model Percent

Use the diagram to write the percent.



1. dark shading

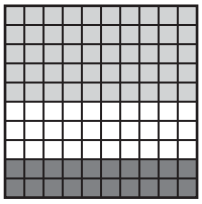
10%

2. light shading

_____

3. not shaded

_____



4. not shaded

_____

5. dark shading

_____

6. light shading

_____

Write the closest benchmark for the percent.

7. 8%

_____

8. 52%

_____

9. 99 percent

_____

10. 87%

_____

11. 12 percent

_____

12. 45%

_____

Problem Solving Real World

13. Out of all the students who auditioned for a play, 43% received a role. About what percent of students who auditioned received roles? Explain.

_____

_____

_____

14. The school cafeteria is holding an election for students to vote on which items they would like to see on the lunch menu. The choices for entrees are grilled chicken and veggie pizza. 36% of students vote for veggie pizza. Which item will be on the lunch menu?

_____

_____

_____

Name _____

Relate Decimals and Percents

Write the decimals as percents.

1. 0.30 — 30%

2. 0.48 _____

3. 0.25 _____

4. 0.87 _____

5. 0.09 _____

6. 0.5 _____

7. 0.02 _____

8. 0.1 _____

9. 0.37 _____

10. 0.3 _____

11. 0.89 _____

12. 0.09 _____

Write the percents as decimals.

13. 18 percent _____

14. 47% _____

15. 98 percent _____

16. 12 percent _____

17. 6 percent _____

18. 21 percent _____

19. 80 percent _____

20. 7% _____

21. 14 percent _____

22. 52 percent _____

23. 60 percent _____

24. 1% _____

Problem Solving Real World

25. In baseball, Anthony hit 0.63 of the pitches thrown at him. What percent of the pitches did Anthony miss?

_____

26. In a theater, 0.85 of the seats are filled. What percent of the seats are empty?

_____

Name _____

Fractions, Decimals, and Percents

Write a decimal, a percent, or a simplified fraction.

1. $\frac{1}{4}$ as a percent

25%

2. $\frac{7}{10}$ as a decimal

3. $\frac{13}{20}$ as a percent

4. 25% as a fraction

5. $\frac{2}{5}$ as a percent

6. $\frac{9}{20}$ as a decimal

7. $\frac{21}{50}$ as a percent

8. $\frac{1}{25}$ as a percent

9. 6% as a fraction

10. $\frac{3}{5}$ as a percent

11. $\frac{12}{25}$ as a decimal

12. $\frac{3}{10}$ as a percent

13. $\frac{3}{4}$ as a percent

14. 65% as a fraction

15. $\frac{1}{5}$ as a percent

16. $\frac{9}{10}$ as a percent

Problem Solving Real World

17. Ashlee has finished $\frac{7}{25}$ of her homework. What percent of the homework does Ashlee still need to finish?

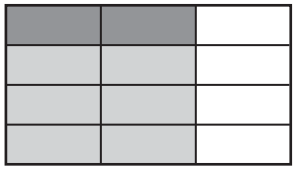
18. Luz catches 83% of the balls in the outfield. What fraction of the balls does she not catch?

Name _____

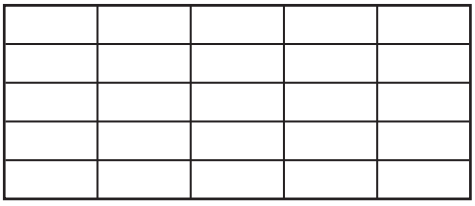
Divide Fractions by a Whole Number

Complete the model to find the quotient. Write the quotient in simplest form.

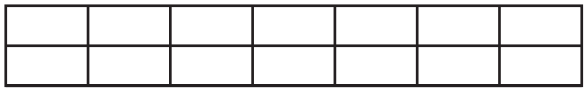
1. $\frac{2}{3} \div 4 =$ $\frac{1}{6}$



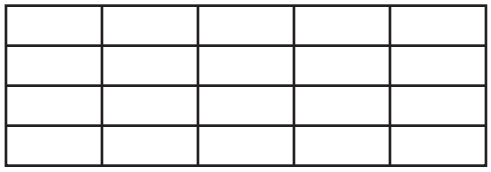
2. $\frac{4}{5} \div 5 =$ _____



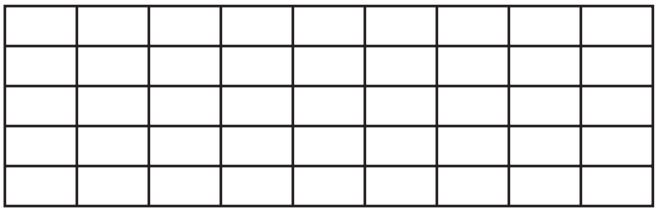
3. $\frac{3}{7} \div 2 =$ _____



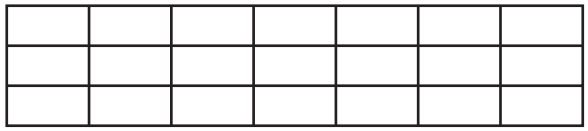
4. $\frac{2}{5} \div 4 =$ _____



5. $\frac{8}{9} \div 5 =$ _____



6. $\frac{6}{7} \div 3 =$ _____



Problem Solving Real World

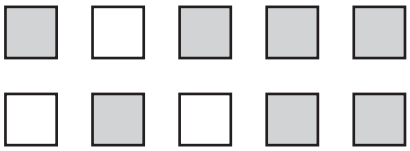
7. Annie, Zane, Erin, and Kenny are each running one leg of a $\frac{1}{2}$-mile relay race. They will divide the distance equally. How far will each person run?

_____

Name _____

Ratios

For 1–3, use the drawing to write the ratio.



1. dark squares to light squares

7 dark squares
3 light squares

7 to 3

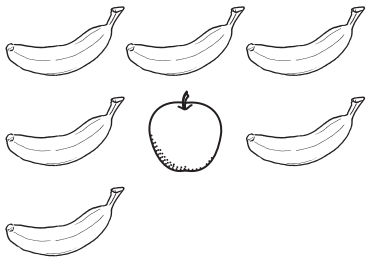
2. light squares to total squares

_____

3. light squares to dark squares

_____

For 4–6, use the drawing to write the ratio.



4. total fruit to bananas

_____

5. apples to bananas

_____

6. apples to total fruit

_____

For 7–12, write the ratio.

7. weekend days to weekdays

_____

8. months in a year to months that start with a vowel

_____

9. months that start with F to months in a year

_____

10. vowels to consonants in *RATIO*

_____

11. vowels to letters in *MATHEMATICS*

_____

12. letters to consonants in *NUMBERS*

_____

Problem Solving Real World

13. Amanda has 15 coins in her pocket. Of these, 8 are quarters. What is the ratio of quarters to coins in Amanda's pocket?

_____

14. Michael has $0.50 in dimes in his pocket. He also has $0.20 in nickels in his pocket. What is the ratio of the number of dimes to nickels in Michael's pocket?

_____

Name _____

Equivalent Ratios

Write the equivalent ratio.

1. 8 to 20 = 4 to 10

$$\frac{8 \div 2}{20 \div 2} = \frac{4}{10}$$

2. 6:5 = _____:35

3. 2 to 3 = 20 to _____

4. 36:24 = 6:_____

5. 6 to 9 = _____ to 27

6. 64:72 = _____:9

7. 11 to 12 = 33 to _____

8. 1:7 = _____:63

9. 21:57 = 7:_____

Write *equivalent* **or** *not equivalent*.

10. 15:10 and 3:2

_____

11. 24 to 16 and 8 to 4

_____

12. 6:9 and 24:45

_____

13. 6:24 and 9:45

_____

14. 15 to 20 and 3 to 4

_____

15. 2:3 and 8:12

_____

Problem Solving Real World

16. Are the ratios of free throws made to free throws attempted by the Rockets and by the Turbos equivalent?

_____

17. In another game, the Rockets attempted only 12 free throws. If the ratio of free throws made to free throws attempted stays the same, how many free throws would you expect the team to make?

_____

Basketball Game Stats		
Team	**Free Throws Made**	**Free Throws Attempted**
Rockets	8	24
Turbos	16	36

Name _____

Rates

Write the rate in fraction form.

1. 80 cars in 20 minutes

$\frac{80}{20}$

2. 20 feet in 4 seconds

3. 250 words per 15 minutes

4. $12 for 6 boxes

5. $96 for 8 DVDs

6. 800 miles in 16 hours

Find the unit rate.

7. $4.80 for 4 markers

8. 60 oz for 10 servings

9. 27 songs on 3 CDs

10. 276 mi on 12 gal of gas

11. $45 for 5 tickets

12. 160 mi in 4 hr

13. 42 tbsp in 7 batches

14. 18 exercises in 6 min

15. $72 for 9 hr

Problem Solving Real World

For 16–18, use the advertisement for the toy store.

16. Find the unit rate for the board games.

17. Tyler has $20. Is this enough to buy one radio-controlled car? Use a unit rate to explain your answer.

18. Building block sets are usually priced at $18 per set. How much can you save by buying one set at the sale price?

This Week's Specials

Radio-Controlled Cars
$80 for 5

Board Games
$36 for 3 games

Miniature Building Blocks
$28 for 2 sets

Name _____

Distance, Rate, and Time

Use the formula $d = r \times t$ to solve. Include the unit in your answer.

1. A truck continuously travels at an average speed of 60 miles per hour. How long does it take the truck to travel 240 miles?

$d = r \times t$
$240 = 60 \times t$
$240 \div 60 = t$
$4 = t$
4 hr

2. A boat travels 3,600 meters in 12 minutes. What is the boat's speed?

_____

3. A cyclist travels 7 hours at a speed of 11 miles per hour. How far does the cyclist travel?

_____

4. $d = 300$ cm

$r = 2$ cm per min

$t =$ _____

5. $d =$ _____

$r = 45$ mi per hr

$t = 6$ hr

6. $d = 400$ yd

$r =$ _____

$t = 20$ min

7. $d =$ _____

$r = 120$ mi per hr

$t = 10$ hr

8. $d = 700$ ft

$r =$ _____

$t = 50$ min

9. $d = 1{,}200$ mi

$r = 600$ mi per hr

$t =$ _____

Problem Solving Real World

Use the road signs and the formula. $d = r \times t$

10. How long will it take a car traveling the speed limit to reach Crestview?

_____

11. A car travels the speed limit. Can it reach Oceanside in 4 hours? Explain.

_____

_____

_____

Name _____

Understand Integers

Write an integer to represent the situation.

1. 5 degrees below zero -5
2. a profit of $37 _____
3. an altitude of 1,384 feet _____
4. a loss of 12 points _____
5. a gain of 15 yards _____
6. $50 in debt _____

Write an integer to represent the situation. Then, tell what 0 represents.

Situation	Integer	What Does 0 Represent?
7. Trisha earned $18 babysitting.		
8. Luis read 5 more books.		
9. The submarine is 2,500 feet below sea level.		
10. Lexi lost $10.		

Problem Solving Real World

11. Zachary deposited $125 into his savings account. What integer can you write to represent the deposit? What does 0 represent?

_____

12. Hannah dives 25 feet below sea level. What integer can you write to represent how far she dives? What does 0 represent?

_____

Name _____

Write and Evaluate Expressions

Write an expression.

1. Rosie has some charms, c, for her charm bracelet. Ray gives Rosie 3 new charms. How many charms does Rosie have now?

_____

2. Grayson has some model cars, m. He loses 2 of them. How many model cars does Grayson have now?

_____

3. Margo has 60 party favors that she wants to share equally with her guests, g. How many party favors will each guest get?

_____

4. Phillip earns $10 each hour he works, h. How much does Phillip earn?

_____

Evaluate each expression for the value given.

5. $t - 14$ for $t = 27$

_____

6. $32 + m$ for $m = 17$

_____

7. $y \times 7$ for $y = 14$

_____

8. $w \times 8$ for $w = 18$

_____

9. $125 \div n$ for $n = 25$

_____

10. $b - 35$ for $b = 93$

_____

11. $c \times 9$ for $c = 13$

_____

12. $d \div 12$ for $d = 72$

_____

13. $f + 0$ for $f = 17$

_____

Problem Solving Real World

14. Kacey is 2 years younger than her sister. If y represents her sister's age, what expression can you write that represents Kacey's age? How old is Kasey if her sister is 14 years old?

_____

15. Greenville gets 3 more inches of snow than Charlotte gets. If s represents the number of inches of snow that Charlotte gets, what expression can you write that represents the amount of snow Greenville gets? How much snow does Greenville get if Charlotte gets 5 inches?

_____

Name _____

Understand Inequalities

Of 2, 10, and 18, which numbers are solutions for the inequality?

1. $b < 15$ — 2, 10

2. $d \geq 8$

3. $r \leq 18$

Of 1, 3, 5, and 11, which numbers are solutions for the inequality?

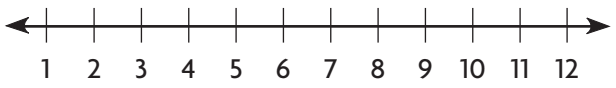
4. $t < 2$

5. $z > 0$

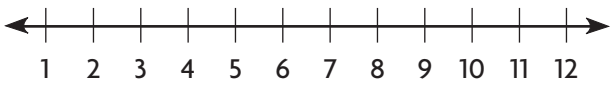
6. $g \geq 4$

Show two solutions for the inequality on a number line.

7. $c > 10$



8. $f \leq 3$



Problem Solving Real World

9. A sign posted at a roller coaster states that all riders must be at least 48 inches tall in order to ride the coaster. Write an inequality using a variable that represents this situation.

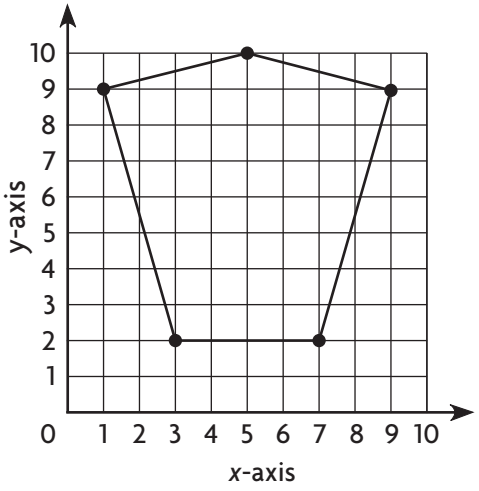
10. Ansley wants to drink at least 64 ounces of water per day, but not more than 72 ounces. How many ounces of water per day might she drink? Name all of the whole number possibilities.

Name _____

Polygons on a Coordinate Grid

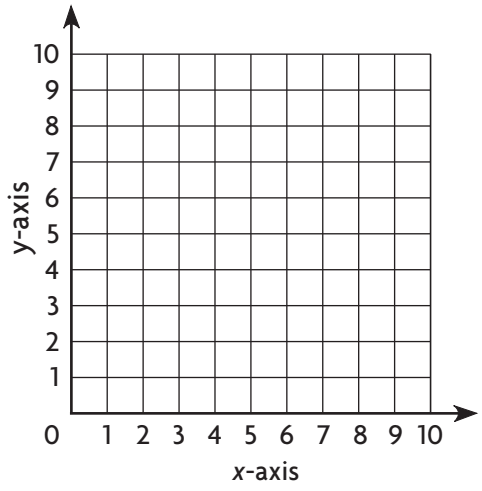
Plot the polygon with the given vertices on a coordinate grid. Identify the polygon.

1. (1, 9), (3, 2), (7, 2), (9, 9), (5, 10)

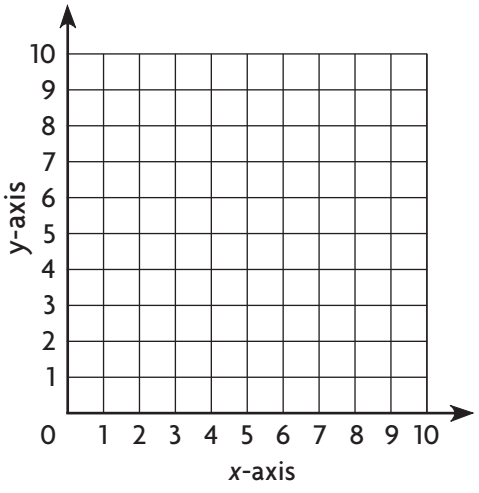


pentagon

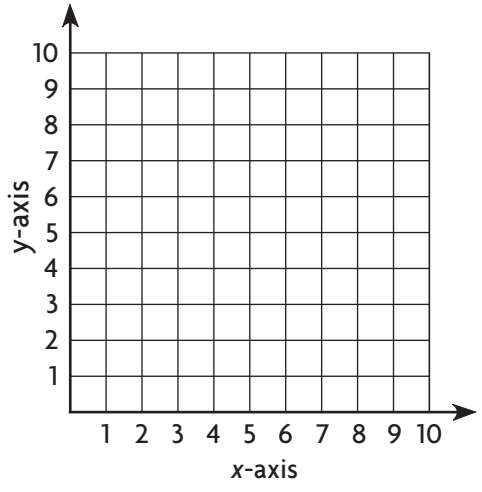
2. (1, 6), (6, 1), (8, 9)



3. (1, 9), (2, 1), (9, 1), (8, 9)



4. (2, 3), (5, 1), (8, 3), (8, 7), (5, 9), (2, 7)



Problem Solving Real World

5. A square tile measures 12 inches by 12 inches. Each unit on a coordinate grid represents 1 inch. (1, 1) and (1, 13) are two of the coordinates of the tile drawn on the grid. What are the coordinates of the other two vertices?

_____

Name _____

Area of a Parallelogram

Find the area of the parallelogram.

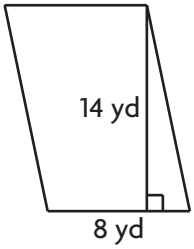
1.

$A = b \times h$

$= 12 \times 6$

$=$ 72 sq ft

2.



_____ sq yd

3. base = 0.4 cm

height = 0.20 cm

Area = _____ sq cm

4. base = 2.4 m

height = 1.7 m

Area = _____ sq m

5. base = $\frac{1}{4}$ ft

height = $\frac{2}{3}$ ft

Area = _____ sq ft

6. base = $3\frac{1}{3}$ in.

height = 9 in.

Area = _____ sq in.

7. base = 0.5 cm

height = 0.08 cm

Area = _____ sq cm

8. base = 7.3 m

height = 2.7 m

Area = _____ sq m

9. base = $\frac{3}{5}$ ft

height = $\frac{1}{4}$ ft

Area = _____ sq ft

10. base = $2\frac{3}{4}$ in.

height = 6 in.

Area = _____ sq in.

Problem Solving Real World

11. The windows of a certain building are in the shape of a parallelogram. The windows have a base of 30 in. and a height of 24 in. The building has a total of 11 windows. What is the total area of all 11 windows?

_____

Name _____

Median and Mode

Find the median and the mode of the data.

1. daily low temperatures the first 7 days of February (°F): 25, 24, 25, 27, 25, 23, 15

median: _____

mode: _____

2. lengths of 8 songs played on the radio (minutes): 2, 3, 3, 5, 4, 3, 4, 3

median: _____

mode: _____

3. ages of 9 children at a dentist's office: 9, 10, 10, 8, 7, 9, 5, 12, 10

median: _____

mode: _____

4. number of touchdowns scored per game: 1, 0, 3, 4, 2, 2, 3, 4, 1, 3

median: _____

mode: _____

5. number of exercises on math homework for one week: 12, 25, 15, 18, 13

median: _____

mode: _____

6. number of tacos eaten per person: 2, 3, 3, 4, 4, 4, 2, 5, 1, 3, 1

median: _____

mode: _____

7. amount earned per hour for babysitting ($): 10, 10, 6, 9, 8, 12

median: $_____

mode: $_____

8. number of days per month: 31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31

median: _____

mode: _____

Problem Solving Real World

9. Jasmine surveys her classmates and records the number of siblings each person has. What are the median and mode of her data?

median: _____

mode: _____

Number of Siblings Per Classmate

2—0—2—2—3—1—4—2—2—5

4—1—0—1—1—2—1—3—1—1

Name _____

Finding the Average

Find the average of the set of numbers.

1. 1, 3, 9, 7

$1 + 3 + 9 + 7 = 20$

$20 \div 4 = 5$

5

2. 10, 18, 20, 8, 11, 17

3. 100, 120, 105, 115, 110

4. 18, 28, 50, 92, 116, 74

5. 737, 843, 188, 592

6. 8, 11, 16, 7, 25, 9, 3, 8, 12

7. 2,639; 1,001; 1,708; 200

8. 24, 23, 22, 24, 26, 24, 30, 33, 34, 30

9. 70, 53, 43, 91, 0, 104, 68, 24, 51

10. 16, 32, 48, 56, 60, 76

11. 10, 9, 8, 10, 12, 11, 16, 19, 10, 15

12. 278, 261, 251, 299, 208, 312, 276, 232, 259

13. Find the average amount of snowfall.

Month	1	2	3	4	5	6	7
Amount of Snowfall (in.)	44	28	23	15	2	0	0

Problem Solving Real World

14. In the snowfall table above, suppose the amount of snowfall for each of the next three months was 6 inches. By how much would this change the average amount of snowfall over the entire period?

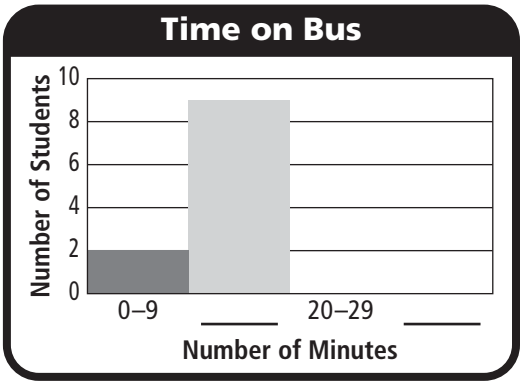
Name _____

Histograms

For 1–3, use the histogram at the right.

The amount of time, in minutes, that it takes students in Lacey's class to get to school by bus is shown below.

10, 25, 12, 20, 15, 8, 27, 13, 22, 30, 19, 9, 11, 17, 26, 21, 18, 20, 28, 16



1. Use 10-minute intervals starting at 0. List the intervals.

_____

2. Make a frequency table of the data.

3. Complete the histogram of the data.

For 4–6, use the data below to make a histogram.

The heights, in inches, of the saplings in the nursery are shown below.

60, 48, 52, 64, 56, 59, 63, 58, 62, 65, 50, 57, 49, 60, 61, 67, 55, 58, 62, 63, 59, 56, 64, 65, 54, 51, 62, 57, 58, 64

4. Use 10-inch intervals for the data. List the intervals.

_____

5. Make a frequency table of the data.

6. Make a histogram of the data.

Problem Solving Real World

7. Use a smaller interval for the heights in Exercises 4–6. List the intervals.

_____

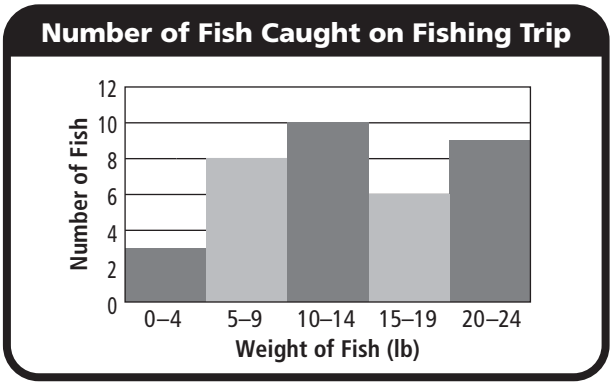
8. How does the histogram change?

_____

Name _____

Analyze Histograms

For 1–2, use the histogram at the right.



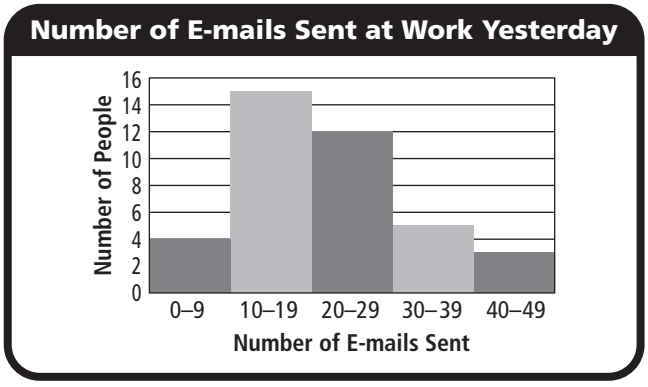
1. Which interval has the greatest frequency?

_____

2. How many fish weighing less than 10 pounds were caught?

_____

For 3–4, use the histogram at the right.



3. Which interval has the least frequency?

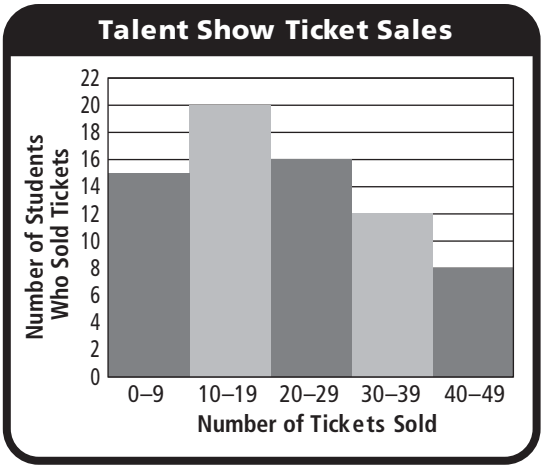
_____

4. How many people sent 30 or more e-mails at work yesterday?

_____

Problem Solving Real World

For 5–7, use the histogram at the right.



5. How many students sold tickets to the talent show?

_____

6. How many more students sold 10–19 tickets than sold 30–39 tickets?

_____

7. Can you tell from the histogram how many tickets were sold in all? Explain.

_____

_____