SECTION 1

Ratios and Proportional Relationships

Teaching Notes for the Activities of Section 1

1–1: (6.RP.1) UNDERSTANDING RATIOS

For this activity, your students will read statements that describe ratios. They will be given choices of ratios and must select the ratio that matches each statement. Answering a question at the end of the worksheet will enable students to check their answers.

Explain that a ratio compares two numbers or quantities. For example, if you have 5 markers and 2 are green and 3 are red, you can write a ratio comparing green markers to red markers as 2 to 3. You may instead write a ratio comparing the red markers to green markers as 3 to 2. Ratios can also be written with a colon, 2:3, or as a fraction, $\frac{2}{3}$.

Discuss the directions on the worksheet, emphasizing that students are to choose the ratio that matches each statement. Remind students to answer the question at the end.

ANSWERS

(1) O, 5:7 (2) A, 32:8 (3) H, 12 to 5 (4) T, 6 to 10 (5) E, $\frac{6}{4}$ (6) O, $\frac{13}{14}$
(7) T, 5 to 6 (8) P, $\frac{10}{12}$ (9) W, 8 to 2 (10) L, 3:2 (11) R, 2:25

The answer to the question is “whole to part.”

1–2: (6.RP.2) UNIT RATES AND RATIOS

For this activity, your students are to determine if statements that describe unit rates associated with ratios are true or false. Answering a question at the end of the worksheet will enable them to check their answers.

Explain that a ratio that has a denominator of 1 is a unit rate. Examples of unit rates include: 4:1, $\frac{7}{1}$, or 3 to 1. Unit rates may also be expressed as a quantity of 1, for example: 30 miles per gallon of gasoline or $3 per pound. Ratios such as 6:3, $\frac{4}{5}$, and 2 to 9 do not represent unit rates. However, any ratio that compares two different quantities can be converted to a unit rate by writing the ratio as a fraction and dividing both numerator and denominator by the denominator. For example, $\frac{6}{3} = \frac{6\div3}{3\div3} = \frac{2}{1}$ or 2:1.

Discuss the directions on the worksheet with your students. After deciding whether a statement is true or false, they are to use the letters of correct answers to answer the question at the end.

ANSWERS

(1) R, true (2) O, true (3) O, false (4) I, false (5) O, true (6) N, false (7) R, false (8) T, true (9) P, false (10) P, true The answer to the question is "proportion."

1–3: (6.RP.3) EQUIVALENT RATIOS AND THE COORDINATE PLANE

For this activity, your students will complete tables of equivalent ratios and then plot the pairs of values in the coordinate plane. They will need rulers and graph paper.

Discuss the example on the worksheet. Explain that equivalent ratios can be found by writing the ratio as a fraction, and then multiplying or dividing the numerator and denominator by the same nonzero number. Note that the process is the same as finding equivalent fractions.

Explain that ratios can be expressed as ordered pairs in the coordinate plane. If necessary, review the coordinate plane, ordered pairs, and how students can plot points. Instruct them to place the origin of their coordinate plane near the center of their graph paper to ensure that they will have enough space to plot all of the points.

Go over the directions with your students. Emphasize that after completing the tables they must use the first value of each ratio as the *x*-coordinate and the second value as the *y*-coordinate. They are then to plot the ordered pairs and use their rulers to connect the points.

ANSWERS

Table 1: 1:2, 2:4, 3:6, 4:8, 5:10 Table 2: 2:3, 4:6, 8:12 Table 3: 12:8, 6:4, 3:2

1–4: (6.RP.3) FINDING THE PERCENT OF A NUMBER AND FINDING THE WHOLE

For this activity, your students will have two tasks: Find the percent of a number and find a whole, given the percent and a part.

If necessary, review that to find the percent of a number students should change the percent to a decimal or fraction and multiply. For example, 75% of $92 = 0.75 \times 92 = 69$, or $\frac{3}{4} \times \frac{92}{1} = \frac{3}{\cancel{4}_{1}} \times \frac{\cancel{92}^{23}}{1} = \frac{69}{1} = 69$.

Also review the process for finding the whole, given the percent and a part. Offer the following example: 35% of _____ = 14. In this case, students should say to themselves, "35% of what number is 14." To find this number using a decimal, students should change the percent to a decimal and divide, $14 \div 0.35 = 40$. To find the number using a fraction, they should first change the percent to a fraction and simplify, $\frac{35}{100} = \frac{7}{20}$ and then divide, $\frac{14}{1} \div \frac{7}{20} = \frac{\cancel{14}^{2}}{1} \times \frac{20}{\cancel{7}_{1}} = \frac{40}{1} = 40$. You may want to note that solving these kinds of problems is usually easier when converting the percents to decimals.

Discuss the directions on the worksheet. Suggest that students follow the instructions at the end to see if their answers are most likely to be correct. (The term most likely is necessary for the rare case that students may make mistakes but still find the correct sum when adding their answers.)

ANSWERS

(1) 16 (2) 27 (3) 6 (4) 3 (5) 24 (6) 12 (7) 35 (8) 15 (9) 80 (10) 32
The sum of the answers is 250. 40% of 250 = 100.

1–5: (7.RP.1) FINDING UNIT RATES

For this activity, your students will be given various problems for which they must find unit rates. Answering a question at the end of the worksheet will enable them to check their answers.

Explain that a unit rate is a ratio written as a fraction with a denominator of 1. Ratios such as feet per second, dollars per hour, and pounds per square inch are unit rates.

Offer this example: During his morning office hours, a doctor saw 15 patients in 3 hours. The unit rate can be found by writing a ratio of the number of patients to the number of hours as a fraction and simplifying: $\frac{15}{3} = \frac{15 \div 3}{3 \div 3} = \frac{5}{1}$, which is a rate of 5 patients per hour. Note that some problems on the worksheet can be expressed as complex fractions. If necessary, review simplifying complex fractions.

Discuss the directions on the worksheet with your students. Remind them to answer the question at the end.

ANSWERS

(1) M, 52 (2) E, $0.01 (3) R, $1.85 (4) S, 61 (5) U, $8.50 (6) R, $1.85 (7) K, 1 (8) P, $0.11 (9) S, 61 (10) E, $0.01 (11) A, 5 (12) T, $1.29 The stores are "supermarkets."

1–6: (7.RP.2) GRAPHING PROPORTIONAL RELATIONSHIPS

For this activity, your students are to determine equivalent ratios by graphing. They will need rulers and graph paper.

Explain that a proportion is a statement that two ratios are equal. One way to determine if two or more quantities are in a proportional relationship is to graph the quantities in the coordinate plane. Quantities that result in a graph that is a line through the origin are equivalent ratios.

To complete this activity, students will need to be familiar with graphing points in the coordinate plane in all quadrants. If necessary, review these skills.

Discuss the directions on the worksheet with your students. After plotting all of the points, students should find three groups of equivalent ratios by identifying points that lie on lines

through the origin. Not all of the plotted points can be expressed as equivalent ratios. Caution your students that they will need to examine the points carefully and use their rulers to draw the lines. For the final part of the activity, students are to express the groups of equivalent ratios as $\frac{y}{x}$.

ANSWERS

Following are the three groups of ratios. $\frac{-9}{-3}, \frac{3}{1}, \frac{6}{2}, \frac{12}{4}$; $\frac{3}{-3}, \frac{-3}{3}, \frac{-6}{6}$; $\frac{-6}{-3}, \frac{2}{1}, \frac{4}{2}, \frac{8}{4}, \frac{-4}{2}$

1–7: (7.RP.2) REPRESENTING PROPORTIONAL RELATIONSHIPS

For this activity, your students will write equations to represent proportional relationships. Answering a question at the end of the worksheet will enable them to check their answers.

Explain that a proportion is an equation that states two ratios are equal. Proportions can be written to represent relationships. For example, suppose that 4 bean seeds germinate for every 5 seeds that are planted. This relationship can be shown by the ratio of $\frac{4}{5}$. The number of seeds expected to grow if 100 seeds were planted can be shown by the proportion of $\frac{4}{5} = \frac{x}{100}$. ($x = 80$)

Discuss the directions on the worksheet with your students. They are to write a proportion to show the relationship in each problem and express the proportions to match the proportions in the Answer Bank. Note that students are not to solve the proportions (as this is not a focus of this Standard). To check if their work is correct, students should answer the question at the end.

ANSWERS

(1) I, $\frac{3}{5} = \frac{x}{10}$ (2) N, $\frac{2}{1} = \frac{54}{x}$ (3) S, $\frac{20}{\$1.00} = \frac{x}{\$5.00}$ (4) R, $\frac{2}{\$1.89} = \frac{5}{x}$ (5) E, $\frac{3}{5} = \frac{6}{x}$
(6) T, $\frac{3}{10} = \frac{x}{120}$ (7) W, $\frac{2}{1} = \frac{x}{52}$ (8) H, $\frac{5}{\$2.00} = \frac{30}{x}$ (9) F, $\frac{1}{20} = \frac{x}{120}$
(10) O, $\frac{10}{25} = \frac{x}{100}$ (11) A, $\frac{\$2.00}{\$5.00} = \frac{x}{\$100.00}$ "Proportio" means "for its own share."

1–8: (7.RP.3) SOLVING WORD PROBLEMS INVOLVING PERCENTS

This activity requires your students to solve a variety of word problems on topics such as commissions, tax, discounts, and percent increase and percent decrease. Students are to determine if given answers are correct, explain why incorrect answers are wrong, and correct wrong answers.

Start the activity by reviewing percents and basic types of percent problems. Explain that whenever attempting to solve a problem, it is essential to formulate a strategy and follow the proper procedure. Understanding the problem and identifying what one wishes to find is vital to finding the solution.

Discuss the directions on the worksheet with your students. Emphasize that some of the provided answers are incorrect. The errors are not computational. If an answer is incorrect, your students must identify the error and solve the problem. Point out that 40% of the problems are correct.

ANSWERS

(1) Incorrect—The weekly salary was not added; correct answer is $685.80. (2) Correct (3) Incorrect—The student found 6% of $368,000 (which he rounded to the nearest hundred). The correct equation is 94% of $n = \$368,000$, where n represents the selling price of the home, which should be $391,489.36 or about $391,500. (4) Correct (5) Incorrect—The student found $0.21 \times \$350,000$ instead of $0.021 \times \$350{,}000$. The correct answer is $7,350. (6) Incorrect—The student found 20% of 15 and subtracted the answer from 15. The correct equation is $0.8n = 15$, where n represents the original price which is $18.75. (7) Incorrect—The student found 6% of $14.31 and rounded to the nearest penny. The correct equation is $1.06n \times \$14.31$ where n is the cost of the bill without the tax. The cost is $13.50. (8) Correct (9) Correct (10) Incorrect—The student found the difference in price. To find the percent decrease he needed to find the difference in price (which he did) and then write a ratio of that difference to the original price. The percent decrease was 30%.

Reproducibles for Section 1 follow.

Name _____ Date _____ Period _____

1–1: UNDERSTANDING RATIOS

A ratio is a comparison of two numbers. Ratios may be written in different ways, for example: 3:5, 3 to 5, or $\frac{3}{5}$.

Directions: Read each statement and find the ratio. Choose your answers from the ratios after each statement. Answer the question at the end by writing the letter of each answer in the space above its problem number. You will need to reverse the letters and divide them into words.

1. Five out of 7 days were rainy last week. What was the ratio of rainy days to the total number of days last week? (U. 7:5 O. 5:7)
2. A punch recipe called for 32 ounces of juice and 8 ounces of soda. What was the ratio of juice to soda? (A. 32:8 R. 8 to 32)
3. Twelve ducks and 5 swans were on a pond. What was the ratio of ducks to swans? (U. 5:12 H. 12 to 5)
4. Callie's teacher handed out 10 red counters and 6 blue counters to each student. What was the ratio of blue counters to red counters? (E. $\frac{10}{6}$ T. 6 to 10)
5. In the election for class president, Reynaldo received 6 votes for every 10 votes that were cast. What was the ratio of Reynaldo's votes to his opponent's votes? (E. $\frac{6}{4}$ I. 6 to 10)
6. Tasha's math class had 14 girls and 13 boys. What was the ratio of boys to girls? (D. 14:13 O. $\frac{13}{14}$)
7. For every 6 dogs waiting in the veterinarian's office 5 cats were also waiting. What was the ratio of cats to dogs? (U. 6 to 5 T. 5 to 6)
8. A green ribbon was 10 inches long. A red ribbon was 12 inches long. What was the ratio of the length of the green ribbon to the length of the red ribbon? (P. $\frac{10}{12}$ H. 12:10)
9. The Lions won 8 of their 10 basketball games. What was the ratio of the number of games they won to the number of games they lost? (R. $\frac{8}{10}$ W. 8 to 2)
10. Randy bought 3 jelly donuts, 1 chocolate donut, and 2 cream-filled donuts. What was the ratio of jelly donuts to cream-filled donuts? (S. 3:1 M. 2:3 L. 3:2)

(*Continued*)

11. Melinda got 23 out of 25 math problems correct. What was the ratio of incorrect problems to the total number of problems? (E. 25:23 R. 2:25 L. 25:2)

Ratios can be used to compare numbers in three ways. Two of these ways are "part to whole" and "part to part." What is the third way?

$\overline{7}$ $\overline{11}$ $\overline{2}$ $\overline{8}$ $\overline{1}$ $\overline{4}$ $\overline{5}$ $\overline{10}$ $\overline{6}$ $\overline{3}$ $\overline{9}$

Name _____ Date _____ Period _____

1–2: UNIT RATES AND RATIOS

A unit rate is a rate expressed as a quantity of 1. Examples of unit rates include 40 miles per gallon of gasoline, $12 per hour, or 3 pounds per bag. These unit rates can be written as ratios: 40:1, $12:1, or 3:1.

Directions: Read each statement. Decide whether the statement is *true* or *false* and circle your answer. Then answer the question at the end by writing the letter of each correct answer in the space above its problem number.

1. During a one-day sale, Sara's mom bought 20 bags of frozen vegetables for $10. This was a unit rate of $\frac{2}{\$1}$. (R. True M. False)

2. Paying $24 for 3 movie tickets is a unit rate of $8 per ticket. (O. True E. False)

3. A bakery sold 20 blueberry muffins and 25 bran muffins. The unit rate of blueberry muffins sold to bran muffins sold was $\frac{25}{20}$ or $\frac{5}{4}$. (E. True O. False)

4. A local pizzeria offered a special to their customers: Join the pizza-a-week club for 10 weeks and buy 10 pies for a total of $120. This unit rate can be expressed as $\frac{10}{\$120}$. (R. True I. False)

5. A ratio of 6 quarts of juice to 2 quarts of water is a unit rate of 3 quarts of juice to 1 quart of water. (O. True U. False)

6. In 22 minutes Emmie walked 2 miles. This is a unit rate of 11 miles per minute. (S. True N. False)

7. A cookie recipe calls for 2 cups of brown sugar to 4 cups of flour. This is a unit rate of $\frac{2}{4}$. (I. True R. False)

8. Chad drove 147 miles in 3 hours. This is a unit rate of 49 miles per hour. (T. True H. False)

9. Ethan bought 24 bottles of spring water for $4, which is a unit rate of 24:4. (A. True P. False)

10. The Harris family spent $20 for 5 ice-cream cones. This is a unit rate of $4 per cone. (P. True S. False)

What kind of equation shows that two ratios are equal?

$\overline{9}$ $\overline{7}$ $\overline{2}$ $\overline{10}$ $\overline{5}$ $\overline{1}$ $\overline{8}$ $\overline{4}$ $\overline{3}$ $\overline{6}$

Name _____ Date _____ Period _____

1–3: EQUIVALENT RATIOS AND THE COORDINATE PLANE

You can find equivalent ratios by doing the following:

1. Write the ratio as a fraction.
2. Multiply or divide the numerator and denominator by the same nonzero number.

For example, the ratio 3:4 is equivalent to 6:8 because $\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$.

Directions: Write equivalent ratios to complete each table below. Express each ratio as an ordered pair. Use the first value of each ratio as the *x*-coordinate and the second value as the *y*-coordinate. Then graph the ratios listed in table 1 and connect the points. Follow the same procedure for tables 2 and 3.

1. 1:2

1	2
	4
3	
4	
	10

2. 2:3

2	3
	6
8	

3. 12:8

12	8
6	
	2

After connecting the points of the ratios in each table, you should see three line segments.

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1–4: FINDING THE PERCENT OF A NUMBER AND FINDING THE WHOLE

The word percent means "per hundred." Percents are ratios that when written in fraction form have a denominator of 100. For example, $25\% = \frac{25}{100}$. Because the denominator is 100, percents can easily be written in decimal form, $25\% = \frac{25}{100} = 0.25$.

Directions: For numbers 1 to 6, find the percent of a number. For numbers 7 to 10, find the whole, given the percent and a part. Then follow the instructions at the bottom of the worksheet.

1. What is 25% of 64? _____
2. What is 36% of 75? _____
3. What is 12% of 50? _____
4. What is 5% of 60? _____
5. What is 10% of 240? _____
6. What is 50% of 24? _____
7. 20% of _____ = 7.
8. 60% of _____ = 9.
9. 35% of _____ = 28.
10. 75% of _____ = 24.

To check that your answers are most likely correct, add your answers. Find 40% of the sum. This final answer should equal 100!

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1–5: FINDING UNIT RATES

A unit rate is a ratio written as a fraction with a denominator of 1. Terms such as $3.50 per gallon, 60 miles per hour, and $2.00 per pound are unit rates.

Directions: Find the unit rates. If necessary, round your answers to the nearest cent or whole number. Match each answer with an answer in the Answer Bank. Some answers will be used more than once, and one answer will not be used. Then answer the question at the end by writing the letter of each answer in the space above its problem number.

1. On a recent class trip, 208 students were divided equally to travel on 4 buses. What was the number of students per bus? _____
2. A store sold 400 sheets of notebook paper for $3.99. What was the cost of 1 sheet of paper? _____
3. Giorgio bought 12 flowers for $22.19. All of the flowers were the same price. What was the cost per flower? _____
4. Leeann typed 305 words in 5 minutes. How many words did she type per minute? _____
5. Sami earned $85 working 10 hours last week at her part-time job. How much did she earn per hour? _____
6. A case containing 36 boxes of nails cost $66.59. What was the cost per box? _____
7. A car traveled 60 miles in one hour. What was the speed in miles per minute? _____
8. 36 bottles of spring water were on sale for $3.99. What was the cost per bottle? _____
9. A salesperson drove 260 miles in 4 hours, 15 minutes. What was the rate in miles per hour? _____
10. During a store special, 5 bags each containing 50 peppermint candies were on sale for a total of $2.50. What was the cost of 1 candy? _____
11. Janelle jogged $3\frac{4}{5}$ miles in $\frac{3}{4}$ of an hour. What was the rate in miles per hour? _____
12. James paid $4.50 for $3\frac{1}{2}$ pounds of apples. What was the cost per pound? _____

(*Continued*)

Answer Bank

E. $0.01	A. 5	K. 1	R. $1.85	O. 5.2
S. 61	P. $0.11	T. $1.29	M. 52	U. $8.50

Many stores display the unit price of items. What is a popular type of store that displays unit prices?

$\overline{9}$ $\overline{5}$ $\overline{8}$ $\overline{2}$ $\overline{6}$ $\overline{1}$ $\overline{11}$ $\overline{3}$ $\overline{7}$ $\overline{10}$ $\overline{12}$ $\overline{4}$

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1–6: GRAPHING PROPORTIONAL RELATIONSHIPS

A proportion is a statement that two ratios are equal. When equivalent ratios are graphed, they result in a line through the origin.

Directions: Plot the following points in the coordinate plane. Decide which points can be written as equivalent ratios.

(4, 12)	(7, 3)	(2, 4)	(–2, –4)	(3, –3)
(1, 2)	(–6, –3)	(–3, –6)	(4, 7)	(–5, 2)
(2, –3)	(–3, –9)	(4, –2)	(–5, 1)	(–4, –5)
(6, –4)	(–2, 4)	(2, 6)	(4, 8)	(6, –6)
(1, 3)	(–3, 3)	(–6, –4)	(–4, 11)	(2, –10)

Write the equivalent ratios as $\frac{y}{x}$.

_____

_____

_____

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1–7: REPRESENTING PROPORTIONAL RELATIONSHIPS

A proportion is an equation that contains two equivalent ratios. For example, $\frac{1}{2} = \frac{8}{16}$ is a proportion.

Directions: Write a proportion for each problem. (You do not have to solve the proportions.) Choose your answers from the Answer Bank. Some answers will not be used. Then answer the question at the end by writing the letter of each answer in the space above its problem number. You will need to divide the letters into words.

1. Annie made 3 of 5 free throws. Write a proportion showing how many free throws Annie could expect to make if she took 10 free throws.
2. Yesterday the Sunny Side Bakery sold twice as many blueberry muffins as bran muffins. Write a proportion showing how many bran muffins they sold if they sold 54 blueberry muffins.
3. If 20 mints cost $1.00, write a proportion showing the number of mints you could buy for $5.00.
4. Bradley bought 2 pounds of pears at $1.89 per pound. Write a proportion showing how much Bradley would pay for 5 pounds of pears.
5. Last season, Richard scored 3 goals for every 5 games of hockey he played. Assuming he scored goals at the same rate this year, write a proportion showing how many games he played if he scored 6 goals.
6. A bag contained marbles of different colors. 3 out of 10 marbles were red. Write a proportion showing how many red marbles you would expect to find if the bag contained 120 marbles.
7. In Crystal's town, on average it rains 2 days every week. Given this average, write a proportion showing how many days she should expect it to rain in a year.
8. Mrs. Rogers purchased 5 protractors for $2.00 for her classroom. Write a proportion showing how much 30 protractors would cost.
9. Jacob has a lawn-mowing service in the summer. He can mow an average-sized lawn in about 20 minutes. Write a proportion showing how many average-sized lawns he can mow in 2 hours.
10. Kayleigh is an excellent baseball player. In her last 25 at-bats, she got 10 hits. Write a proportion showing how many hits she can expect to have in 100 at-bats.

(*Continued*)

11. DeShawn manages to save $2.00 for every $5.00 he earns at his part-time job. Write a proportion showing how much he can expect to save if he earns $100.00.

Answer Bank

G. $\frac{2}{1} = \frac{x}{365}$	F. $\frac{1}{20} = \frac{x}{120}$	R. $\frac{2}{\$1.89} = \frac{5}{x}$
V. $\frac{5}{\$2.00} = \frac{x}{\$100.00}$	E. $\frac{3}{5} = \frac{6}{x}$	S. $\frac{20}{\$1.00} = \frac{x}{\$5.00}$
I. $\frac{3}{5} = \frac{x}{10}$	N. $\frac{2}{1} = \frac{54}{x}$	M. $\frac{\$2.00}{30} = \frac{x}{5}$
U. $\frac{\$1.89}{21} = \frac{x}{5}$	A. $\frac{\$2.00}{\$5.00} = \frac{x}{\$100.00}$	T. $\frac{3}{10} = \frac{x}{120}$
O. $\frac{10}{25} = \frac{x}{100}$	W. $\frac{2}{1} = \frac{x}{52}$	H. $\frac{5}{\$2.00} = \frac{30}{x}$

The word “proportion” is taken from a Latin word, “proportio.” What does “proportio” mean?

$\overline{9}$ $\overline{10}$ $\overline{4}$ $\overline{1}$ $\overline{6}$ $\overline{3}$ $\overline{10}$ $\overline{7}$ $\overline{2}$ $\overline{3}$ $\overline{8}$ $\overline{11}$ $\overline{4}$ $\overline{5}$

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1–8: SOLVING WORD PROBLEMS INVOLVING PERCENTS

Percents are used in countless everyday situations. Understanding percents and being able to solve problems are important skills in mathematics.

Directions: Solve each problem and compare your answer to the one provided. If the answer is correct, write "correct" on the line. If the answer is wrong, write "incorrect," explain why the original answer is wrong and write the correct answer. Hint: 40% of the problems are correct.

1. Juan works in a sporting goods store for a salary of $450 per week, plus a 6% commission on his sales. One week his sales were $3,930. What was his income that week?

$235.80 _____

_____

2. How much money is saved by purchasing a bicycle priced $320 at a 20% discount rather than one marked $320 with discounts of 10% and 10%?

$3.20 _____

_____

3. The Smiths wish to sell their home. They agreed to pay the real estate agent 6% of the selling price. After they pay the commission, they need to have $368,000 left to be able to buy their new home. What must the selling price of their current home be? (Round your answer to the nearest hundred.)

$22,100 _____

_____

4. Kara recently lost interest in tennis. She sold her $58 tennis racket to a friend at a 20% loss from the amount she originally paid for the racket. How much did Kara charge her friend for the tennis racket?

$46.40 _____

_____

5. School taxes are 2.1% of the assessed value of property in the town of Centerville. Find the school tax on a home whose value is assessed at $350,000.

$73,500 _____

_____

6. John purchased a CD for $15 after receiving a discount of 20%. Find the original price of the CD.

$12.00 _____

_____

(*Continued*)

7. A state's sales tax is 6%. If the bill, including the tax, on a meal at a fast food restaurant is $14.31, what is the cost of the meal without the tax?

$0.86 _____

_____

8. Ten years ago, the population of Pleasant Lake was 35,680. Now it is 51,736. What is the percent of increase?

45% _____

_____

9. In a recent city election, 27,720 people out of 70,000 registered voters voted. What percent of the voters cast a ballot?

39.6% _____

_____

10. A pair of sneakers originally cost $90.00. A year later, the price of the sneakers was reduced to $63.00. What was the percent of decrease?

27% _____

_____