NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD\_\_\_\_\_\_\_\_\_\_\_ SCORE\_\_\_\_\_\_\_\_\_ Unit 4 Review N

1. The high school has a new debate club this year. In the club there are 4 girls and 16 boys.
	1. Find the simplest ratio of girls to boys in the debate club.
	2. What percent of the students in the debate club are girls?
2. If there are 2 girls, how many boys are there?
3. Find another equivalent ratio.
4. In the drama club, there are 3 girls and 14 boys. Is the ratio of girls:boys in the drama club the same as the ratio of girls:boys in the debate club?
5. On average Ron’s car can go 450 miles on a full tank of gas. His gas tank can hold 15 gallons of gas.
6. Determine the number of miles he gets per 1 gallon of gas at this rate.
7. Determine how many miles he can go on 8 gallons of gas.
8. Ron is going on a trip where there will not be any gas stations available. He completely fills his tank before he leaves and packs an additional 10 gallons of gas. How many total miles will he be able to travel before he completely runs out of gas?
9. Determine if driving 120 miles on 4 gallons of gas is proportional to Ron’s gas mileage.
10. Determine if driving 15 miles on $\frac{1}{2}$ gallon of gas is proportional to Ron’s gas mileage.
11. Determine if driving at a rate of 200 miles on 6 gallons of gas is proportional to Ron’s gas mileage.

|  |  |  |
| --- | --- | --- |
| 1. $\frac{3}{5}=\frac{x}{15}$
 | 1. $\frac{2}{4}=\frac{x}{15}$
 | 1. $\frac{5}{x}=\frac{9}{6}$
 |
| 1. $\frac{7}{3.5}=\frac{9}{x}$
 | 1. $\frac{5}{3}=\frac{y}{1}$
 | 1. $\frac{9}{x}=\frac{12}{8}$
 |

9. You have a picture that you need to enlarge. The original width is 7 cm and the length is 12 cm. After working on your computer, you now have a picture that is 35 cm wide and 60 cm long. Are the two pictures proportional?

10. The best made rice is made by using 4 cups of water for every 3 cups of rice. Tim made his rice by using 12 cups of water and 16 cups of rice. Is his rice going to turn out?

11. On the map, 1 cm is really 2.5 miles. From Salt Lake City to Highland, the map measures the distance of 11 cm. Joel thinks that this means the distance from Highland to Salt Lake City is 27.5 miles. Is Joel right?

12. Bob is building a brand new house. He wants the width of his house to be 40 feet and the length to be 50 feet long. He needs to make the blue prints in order to build his house. On the blue print he makes the width of his house 18 inches and the length of his house 22.5 inches. Is Bob’s house proportional to the blueprints?

13. A Mercedes Benz is 15 feet long by 6.5 feet wide. Billy wants to make a model replica for his collection of model cars. When he is done his model car measures 5.5 inches wide and 11.5 inches long. Is his model car proportional to the real car?

14. Find the missing length of the similar figures. Set up the proportion & solve.

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1. In a bag of trail mix, there are 3 cups of nuts for every 1 cup of raisins. Complete the table and graph to show this relationship. Be sure to label your graph.

|  |  |
| --- | --- |
| **Raisins****(cups)** | **Nuts****(cups)** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

1. What does the point $(3, 9)$ represent in the situation?
2. What is the unit rate?
3. What does the point $(1, 3)$ represent in the situation?
4. If I use 7 cups of raisins, how many cups of nuts should I use? Write the ordered pair that represents this ratio.
5. If I have a total of 60 cups of ingredients, how many cups of each ingredient did I use? Write your answer as an ordered pair.
6. Miguel mixed 4 cups of raisins with 7 cups of nuts. Did he follow this recipe? Explain.
7. **Find, Fix, and Justify:** For the problem above, Darcy was asked what the ordered pair $(5, 15)$ represents in the situation. Darcy made a common mistake and said that the point represents 5 cups of nuts and 15 cups of raisins. Explain the mistake that Darcy made and write the correct answer.

|  |  |
| --- | --- |
| 17. The graph on the right shows a proportional relationship. Explain why the graph is proportional and identify the unit rate from the graph. | Macintosh HD:Users:abench:Desktop:Screen Shot 2015-11-11 at 6.04.04 PM.png |

NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD\_\_\_\_\_\_\_\_\_\_\_ SCORE\_\_\_\_\_\_\_\_\_ Unit 4 Review H

Write the simplified ratio.

1. On a plane there are 98 adults and 26 children. What fraction of the passengers on the plane are children?

Answer #1\_\_\_\_\_\_\_\_

1. On a plane there are 98 adults and 26 children. What is the ratio of adults to children?

Answer #2\_\_\_\_\_\_\_\_

1. Write the unit rates for the situation: James ran 2 miles in 1/4 of an hour.

Answer #3\_\_\_\_\_\_\_\_

Use the unit rate to answer the question:

1. Lisa can read 10 pages in 12 minutes. Write the unit rate in pages per minute.

Answer #4\_\_\_\_\_\_\_\_

1. How many pages can Lisa read in 8 minutes?

Answer #5\_\_\_\_\_\_\_\_

Solve the following proportions equations:

6. $\frac{4}{27}= \frac{x}{7}$

Answer #6\_\_\_\_\_\_\_\_

7. $\frac{x}{6}= \frac{1}{5}$

Answer #7\_\_\_\_\_\_\_\_

8. $\frac{9}{x}= \frac{15}{35}$

Answer #8\_\_\_\_\_\_\_\_

9. $ \frac{3}{4}= \frac{25}{x}$

Answer #9\_\_\_\_\_\_\_\_

1. Which is the better buy? Jiffy peanut butter: $2.19 for a 28 oz. bottle or Skippy: $1.99 for a 25 ounce bottle.

Answer #10\_\_\_\_\_\_\_

1. Jeff ran 500 meters in 1.3 minutes. Jerry ran 1000 meters in 5 minutes. Who ran faster?

Answer #11\_\_\_\_\_\_\_

12. Your uncle wants the ratio of flowers and vegetables planted in his garden to be 3 flowers : 5 vegetables. He plants 56 vegetables. How many flowers should he plant? Round to the nearest whole.

Answer #12\_\_\_\_\_\_\_

13. If your uncle wants to plant a total of 91 plants how many vegetables should he plant? Round to the nearest whole.

Answer #13\_\_\_\_\_\_\_

14. The length of two ribbons are in the ratio 2:7. If the length of the longer ribbon is 20 inches, find the length of the shorter ribbon.

Answer #14\_\_\_\_\_\_\_\_

1. The two triangles are proportional. Find the missing side length.

7 in

X in

4 in

 Answer #15\_\_\_\_\_\_

10 in