**UNIT 5 REVIEW (Math 7)**

**Show your work where possible.**

1) The side lengths of the figure below are dilated by a scale factor of $\frac{1}{4}$. Which statement describes the figure that results?

d

b

c

a

A. The perimeter of the original figure is 8 times the perimeter of the figure that results.

B. The area of the original figure is 8 times the area of the figure that results.

C. The perimeter of the original figure is

 16 times the perimeter of the figure that results.

D. The area of the original figure is 16 times the area of the figure that results.

2) If the rectangle is enlarged by a scale factor of 3, what will be the new area?

5 ft

2 ft

3) If the quadrilateral below is reduced by a scale factor of 1/3, what will be the new perimeter?

12 ft

6 ft

9 ft

6 ft

4) If the quadrilateral above is enlarged by a scale factor of 3, what will be the new perimeter?

5) Tanya made 32 ounces of trail mix by mixing M&Ms and peanuts. The ratio of peanuts to M&Ms in the trail mix is 1:3. How many ounces of peanuts are in the trail mix?

6) Frances bakes 3 cakes for a party. Each cake calls for an equal amount of flour, and she uses $7\frac{1}{2}$ cups of flour altogether. How much flour is there in each cake?

7) Anthony is helping to make snacks for the Super Bowl. To make a dip for chips, he needs 4 ounces of salsa per person. If he has two 15-ounce bottles of salsa, how many people can Anthony make dip for?

8) A 2-liter carton of milk is $2.55. A 4-liter carton is $4.25. What is the difference in cost per liter between the larger and smaller cartons of milk?

9) If Frank can paint ¼ of a wall in 15 minutes, how long will it take him to paint a room with 4 walls?

10) If ¼ of a pizza can feed one person, how many pizzas does Ms. Kempf need to feed 10 people?

11) What is the ratio of wins to losses in the chart below?

 North State Titans # of each

 Wins 8

 Losses 3

 Ties 2

12) What is the ratio of snails to fish?

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13) What is the ratio of circles to triangles?

14) In a classroom of 32 students, there are 19 girls. what is the ratio of girls to boys?

15) In the box below, what is the ratio of red marbles to blue marbles?

red

red

blue

red

red

red

red

red

blue

blue

blue

blue

blue

blue

blue

16) A new hybrid car can go 384 miles on 12 gallons of gas. If you drove for 235 miles, about how many gallons of gas did you use?

17) According to the table below, which vehicle will provide you with the *best* gas mileage?

|  |  |  |  |
| --- | --- | --- | --- |
| **Car** | **Gas tank size** | **Total distance on full tank** | **Miles per gallon** |
| 1 | 12 | 336 | ? |
| 2 | 14 | 434 | ? |
| 3 | 15 | 375 | ? |

18) Your family began your trip with a full tank of gas in the car. You drove 368.5 miles and stopped to fill the tank back up with gas. It took 14.2 gallons of gas to fill up. *About* how many miles per gallon did you average on your trip?

19) You babysit for some neighborhood children for a certain amount each hour. According to the table, how much do you make each hour?

|  |  |
| --- | --- |
| **Hours** | **Amount ($)** |
| 3 | $13.50 |
| 4 | $18.00 |
| 5 | $22.50 |

20) Isaiah filled up his 15-gallon gas tank for $48.75. Shelly filled up her 13-gallon tank for $41.47 at a different station. Who got the better buy per gallon? Support your answer.

21) Tire Tower is having a sale. Customers can buy 4 new tires for $359.96. What is the unit price of the tires?

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22) Complete the chart below.

|  |  |  |  |
| --- | --- | --- | --- |
| **Amount** | **Gummy Worms** | **M&Ms** | **Warheads** |
| 1 ounce |  |  |  |
| 3 oz |  | $0.90 |  |
| 5.5 oz |  |  |  |
| 8 oz |  |  | $1.52 |
| 12 oz | $3.00 |  |  |

23) List the types of candy from most expensive to least expensive.

Make a graph showing the costs of the three types of candy.

Use the graph to answer the following:

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24) How much would 7 ounces

 of M&Ms cost?

25) How much would 9 ounces

 of Gummy Worms cost?