

## 2<sup>nd</sup> Quarterly – SP: NS.1-3, RP.1-3 STUDY GUIDE

### Non-Calculator

1) The highest elevation in a small country occurs on a mountain 1,562 meters above sea level, while the lowest elevation in the same country occurs at 38 meters below sea level. What is the difference in elevation between the highest and lowest points?

2) The value of one share of stock was \$25.29 on Monday. The changes in the value of the stock over the week are listed in the table.

Day of the Week	Change in Stock Value(\$)
Tuesday	-0.51
Wednesday	1.17
Thursday	-0.24
Friday	-0.63

What was the value of the stock at the end of the day on Friday?

3) Identify the following fractions as terminating or repeating?

A)  $\frac{127}{15}$

B)  $\frac{124}{4}$

C)  $\frac{196}{32}$

D)  $\frac{195}{27}$

4) An insurance salesperson earns a 5.5% commission on every piece of automobile insurance that she writes. What is her commission if she sells a policy that has a \$1600 premium?

A) \$8.75

B) \$8,800.00

C) \$880.00

D) \$88.00

5) Harris Teeter advertised apples at \$3.25 for 4 pounds. Publix advertised 6 pounds of apples for \$5.25. Find the unit rate for each grocery store and determine the better buy.

6) Which expression is **not** equal to  $\frac{13}{-6}$ ?

a.  $\frac{-13}{-6}$

b.  $-\frac{13}{6}$

c.  $\frac{-13}{6}$

d.  $-2\frac{1}{6}$

7) The formula  $C = \frac{5}{9}(F - 32)$  converts Fahrenheit (F) temperature to Celsius (C) temperature. An Australian was visiting Maine and saw on a sign that it was  $-8^{\circ}\text{F}$  outside. Convert it to degrees in Celsius so that the Australian can understand the temperature.

- A)  $-27^{\circ}\text{C}$       B)  $-23^{\circ}\text{C}$       C)  $-25^{\circ}\text{C}$       D)  $-15.5^{\circ}\text{C}$

8) Simplify the following problem:  $\frac{-\frac{1}{3}[3^2 + -17] - (-8)}{-4 - 2}$

- A)  $-\frac{2}{3}$       B)  $-6$       C)  $-\frac{1}{18}$       D)  $-2$

9) Katie receives a weekly allowance of \$12.60. She receives  $\frac{1}{6}$  of her allowance each day. How much allowance does Katie receive in one day?

10) The table shows how much a store charges for certain numbers of pencils.

Number of pencils ( $p$ )	Cost ( $c$ )
4	\$0.72
7	\$1.26
12	\$2.16

Based on the table, which equation could be used to calculate the cost,  $c$ , of any number of pencils,  $p$ ?

- A  $c = 0.09p$   
B  $c = 0.18p$   
C  $c = 0.54p$   
D  $c = 0.72p$

11) Robert mixed  $\frac{3}{4}$  liter of yellow paint with  $\frac{1}{3}$  liter of red paint to make a batch of orange paint. When he needed more orange paint, he used exactly  $\frac{2}{5}$  liter of red paint. Using the same ratio, how many liters of yellow paint should Robert use to make the new batch of orange paint?

## 2<sup>nd</sup> Quarterly – SP: NS.1-3, RP.1-3 STUDY GUIDE

### Calculator Active

1) It took Mya  $\frac{2}{5}$  of an hour to ride her bike  $2\frac{1}{2}$  of a mile. How many miles per hour can Mya ride her bike?

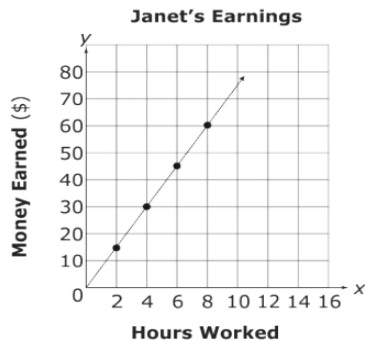
2) To make 7 servings of fruit punch, Danielle used 4 cups of grape juice, 3 cups of water, and  $\frac{3}{4}$  of a cup of sugar. How many cups of sugar will she use to make 2 servings of fruit punch?

3) Jackie's salary is proportional to the number of hours she works. Knowing that she made \$56 in 8 hours, create a graph that best models the relationship between the number of hours Jackie works and her salary?

4) Does this table represent a proportional relationship? If yes, what is the constant of proportionality?

x	y
5	15
6	18
7	21

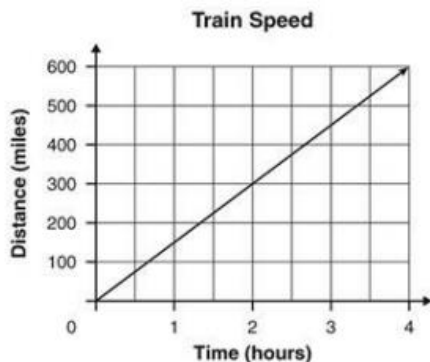
5) The graph below shows the amount of money Janet earned at her new job.



How much does Janet earn per hour?

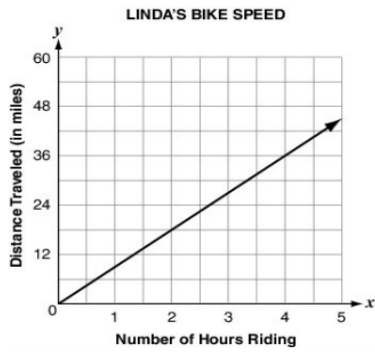
- A. \$7.50                                      C. \$10.50  
B. \$10.00                                     D. \$15.00

6) According to this graph, how fast is the train moving in miles per hour?



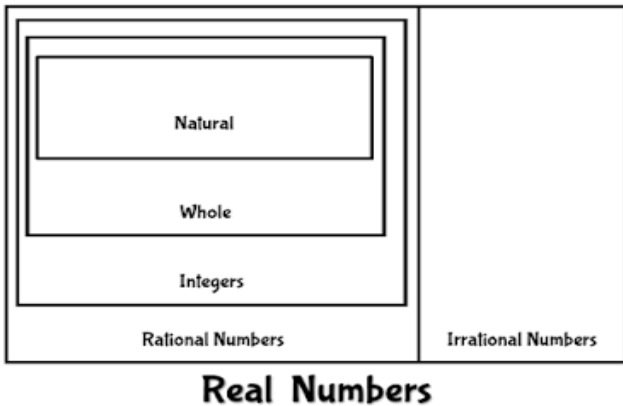
- A. 150    C. 450  
B. 300     D. 600

- 7) The graph below shows the relationship between the number of hours Linda rides her bike and the distance she travels.



How many miles does Linda travel in 1 hour?

- A) 6 miles                      C) 12 miles  
 B) 9 miles                      D) 18 miles
- 8) A 14-ounce box of cereal costs \$3.50. Which equation correctly relates the price ( $p$ ) with the weight ( $w$ ) of the cereal?
- A)  $p = 2.5w$               B)  $p = 0.25w$               C)  $p = 3.5w$               D)  $p = 14w$
- 9) Fill in the chart with 3 examples in each box.



- 10) Which of the following numbers is irrational?  $\sqrt{400}, \sqrt{2}, -\sqrt{9}, -\sqrt{17}$
- 11) What two integers does  $\sqrt{140}$  fall between?
- 12) Convert  $2.171\bar{7}$  to a fraction.
- 13) Solve:  $-2-54x=13$
- 14) Solve:  $7-3x=2x+7-5x$
- 15) Solve:  $19=-4+25x+10$

