



**DEMOCRACY PREP  
PUBLIC SCHOOLS**  
*Work Hard. Go to College. Change the World!*

# **Rising 7<sup>th</sup> Grade Summer Break Math Packet**



Name: \_\_\_\_\_

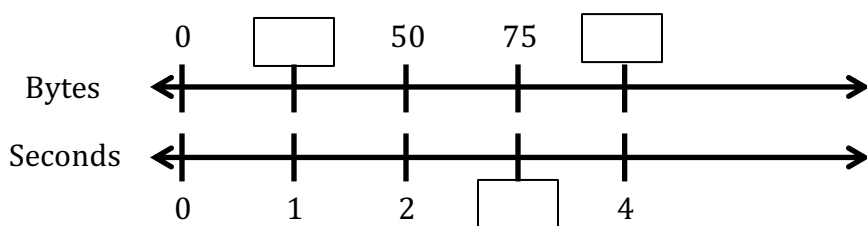
**DUE: First Day of Prep Academy,  
August 28, 2018**

Directions: ALL WORK must be shown for full credit.

Don't forget to underline important information and circle key words!

## Part 1 – Ratios and Rates

- The ratio of bytes to seconds is 50:2.
  - Complete the double number line diagram to model this ratio.



- Use the diagram to determine the unit rate.

Answer: \_\_\_\_\_ bytes per second

- A recipe for rice uses a ratio of cups of milk to eggs that is 2:1. Which of the following ratios of rice to water would be proportional to the ratio used in the recipe?
  - 2 cups of milk for every 3 eggs
  - 1 cup of milk for every 2 eggs
  - 4 cups of milk for every 2 eggs
  - 2 cups of milk for every 4 eggs

3. A chimpanzee eats 6 bananas every 1 hour.

a) At what rate is the chimpanzee eating in bananas per hour?

Answer: \_\_\_\_\_ bananas per hour

b) Fill in the table of values below.

Hours	1		3	4	5
Bananas		12			

## Part 2 – Coordinate Plane

For questions 5 and 6, use **Point A (3, 6)**.

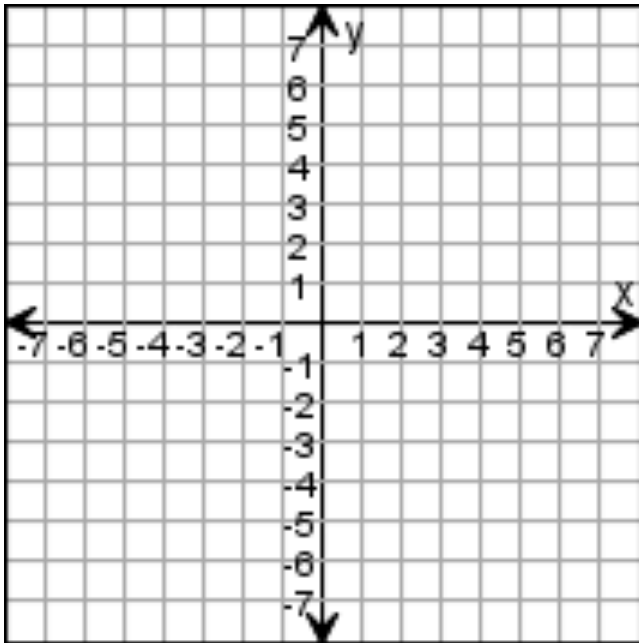
4. If Point A is reflected across the y-axis, what will be the new coordinates?

Answer: \_\_\_\_\_

5. If Point B is located at (3, -3), what is the vertical distance between Point A and Point B?

- A. 5 units
- B. 9 units
- C. 8 units
- D. - 9 units

6. Plot and label the following points on the coordinate plane below. DO NOT CONNECT THE POINTS.



D: (3, -5)

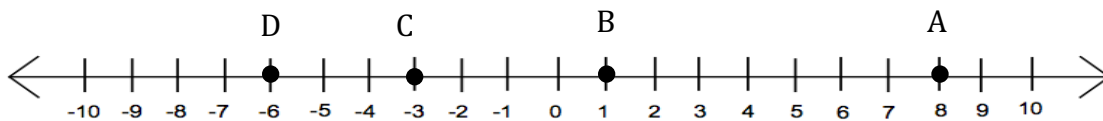
P: (0, 4)

C: (-3, 1.5)

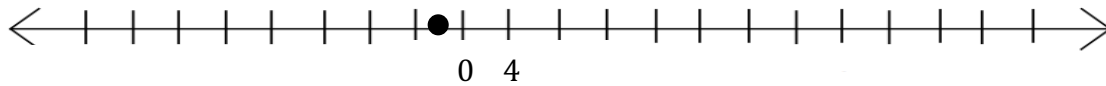
S: (-2, 0)

### Part 4 – Positive and Negative Numbers

7. Which point has the least absolute value?



- A. Point A
- B. Point B
- C. Point C
- D. Point D



8. What number is marked with the circle on the number line above?
- A. - 2
- B. - 1.5
- C. - 3
- D. 6
9. Mr. Jones goes to the bank and finds out that he has an account balance of - 20 dollars.
- a) Does Mr. Jones owe a debt less than or greater than 10 dollars? Use your knowledge of the number line and absolute value to explain in a complete sentence.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- b) If Mr. Jones gets paid \$40 today, how much money will be in his bank account? Draw a number line or write a number sentence in the space below to demonstrate your answer.

Answer: \_\_\_\_\_

## Part 5: Adding and Subtracting Fractions

Add or subtract the fraction below. Simplify your answer.

1.  $\frac{2}{4} + \frac{1}{4} = \underline{\quad} = \underline{\quad}$

2.  $\frac{2}{10} + \frac{4}{10} = \underline{\quad} = \underline{\quad}$

3.  $\frac{1}{3} + \frac{2}{3} = \underline{\quad} = \underline{\quad}$

4.  $\frac{4}{8} + \frac{2}{8} = \underline{\quad} = \underline{\quad}$

Add or subtract the fractions with unlike denominators below.

Simplify your answer.

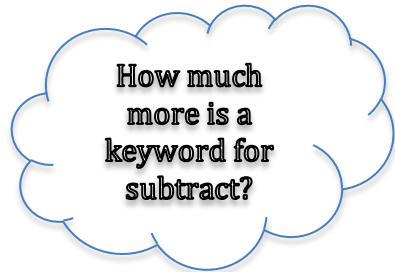
1.  $\frac{1}{2} + \frac{1}{4} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

2.  $\frac{1}{5} + \frac{4}{10} = \underline{\quad} + \underline{\quad} = \underline{\quad} = \underline{\quad}$

3.  $\frac{3}{9} + \frac{2}{3} = \underline{\quad} + \underline{\quad} = \underline{\quad} = \underline{\quad}$

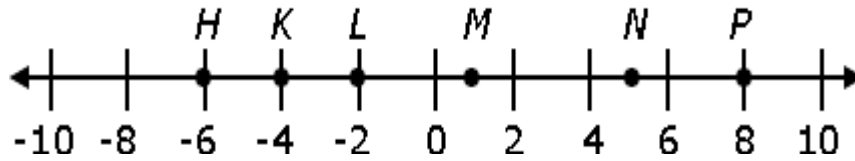
4.  $\frac{1}{3} + \frac{2}{5} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

5. Nina is baking a cake for her mother's birthday. The recipe calls for  $\frac{6}{8}$  cup of white sugar and  $\frac{1}{3}$  cup of brown sugar. **How much more** white sugar does Nina need than brown sugar?



Nina needs        cups more brown sugar.

6. Between which two points is the number  $-2.5$  located on the number line below?

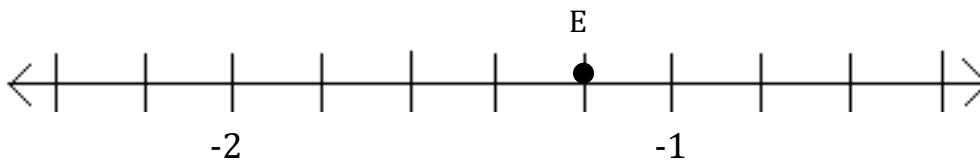


- A. between point  $H$  and point  $K$
- B. between point  $K$  and point  $L$
- C. between point  $L$  and point  $M$
- D. between point  $M$  and point  $N$

7. Devin ate  $\frac{3}{6}$  of a medium Papa John's cheese pizza. His friend Donte ate  $\frac{1}{3}$  of a medium Papa John's cheese pizza. Who ate a bigger portion of pizza?

- A. Devin ate more.
- B. Donte ate more.
- C. They ate the same amount.

8. Which number best represents the location of  $E$  on the number line?



- A.  $-1\frac{1}{4}$
- B.  $-1\frac{1}{5}$
- C.  $-1\frac{1}{6}$
- D.  $-\frac{1}{5}$

## Part 6: Multiplying Fractions

Multiply the fractions below. Simplify your answer.

1.  $\frac{1}{2} \times \frac{1}{3} = \underline{\hspace{2cm}}$

2.  $\frac{1}{3} \times \frac{2}{4} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Multiply the mixed numbers. Simplify your answer.

3.  $1\frac{1}{2} \times \frac{1}{4} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4.  $1\frac{1}{5} \times 2\frac{4}{10} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. A recipe calls for  $\frac{1}{5}$  of a cup of flour. How much flour will be needed if the recipe is tripled?

- A.  $\frac{3}{15}$  cup
- B.  $\frac{1}{3}$  cup
- C. 3 cups
- D.  $\frac{3}{5}$  cup

