



**DEMOCRACY PREP  
PUBLIC SCHOOLS**

*Work Hard. Go to College. Change the World!*

# **Rising 8<sup>th</sup> Grade Summer Break Math Packet**



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

**DUE:  
August 28, 2018**

Directions: ALL WORK must be shown for full credit.

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

1) Match each word with its matching definition on the right.

a. Algebra	_____ : A number by itself
b. Expression	_____ : A number sentence that says that two expressions are equal to each other
c. Equation	_____ : +, -, ·, ÷
d. Constant	_____ : A number sentence of terms separated by operators
e. Coefficient	_____ : A number in front of variables
f. Operator	_____ : Math that uses symbols and letters
g. Variable	_____ : A symbol used to represent an unknown amount

2) An amusement park charges an entrance fee of \$5.00. They also charge \$1.50 per ride. Which expression represents the total cost of entering the park and riding  $r$  rides?

- A.  $6.50r$
- B.  $5 + 1.5r$
- C.  $5r + 1.5$
- D.  $1.5r$

How much would it cost to go to the amusement park and ride on four rides?

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

3) Boston TAXI charges \$1.60 just for entering the cab. Then it costs \$0.40 for each additional mile.

a) Write an expression to represent the cost of traveling,  $m$ , miles in a NYC taxi.

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

b) Mrs. Hansen rode a Boston taxi 8 miles. How much did it cost her in total?

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

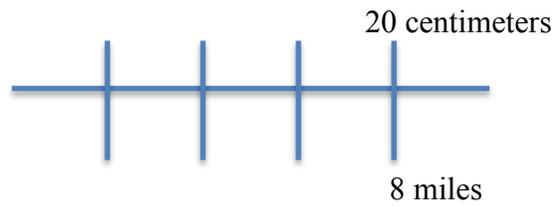
c) Mr. Hatfield has \$20 to spend on his taxi. Write an inequality that represents how far he can travel in his taxi.

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

d) Graph the solution of the inequality on the number line below.

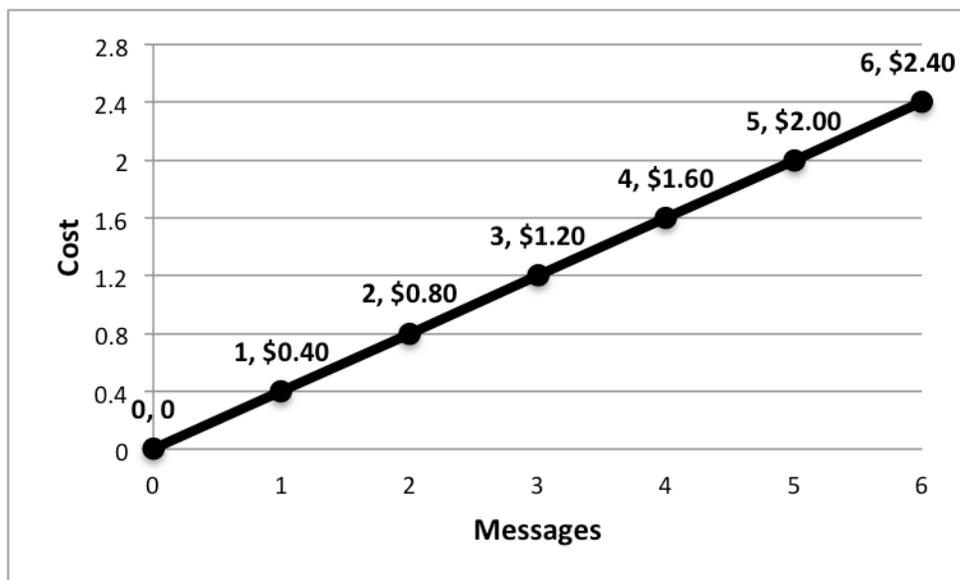


4. What is the unit rate shown on the diagram below?



- A.  $\frac{2}{5}$  cm per mile
- B. 20 cm per mile
- C. 2 cm for every 5 miles
- D.  $\frac{5}{2}$  cm per mile

5. The graph below shows the cost of sending text messages. What point can be used to identify the unit rate?



- A. (0,0)
- B. (5, \$2.00)
- C. (\$0.40, 1)

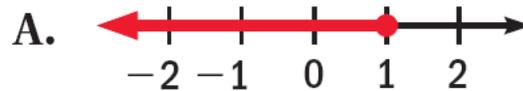
D. (1, \$0.40)

6. A train travels 120 miles in 1.5 hours. At this rate, how many miles can it travel in 6 hours?

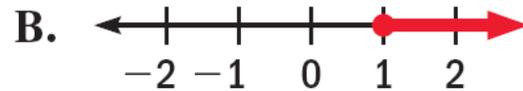
Answer \_\_\_\_\_

Directions: Match each inequality with its graph.

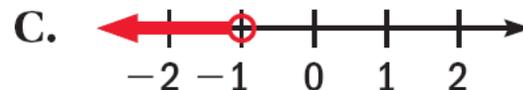
7.  $x > -1$  \_\_\_\_\_



8.  $x \leq 1$  \_\_\_\_\_



9.  $x \geq 1$  \_\_\_\_\_



10.  $x < -1$  \_\_\_\_\_



11. Solve the equation below for  $y$ . Show all inverse operations.

$$5 = 3y - 1$$

$y =$  \_\_\_\_\_

