

Name:

Class:

## Grade 8, Unit 3: Practice Summative Assessment

### Question 1

Select **all** the points that are on the graph of the line  $2x + 5y = 30$ .

- (A) (0, 6)
- (B) (0, 15)
- (C) (5, 4)
- (D) (4, 5)
- (E) (10, 2)
- (F) (10, 10)

### Question 2

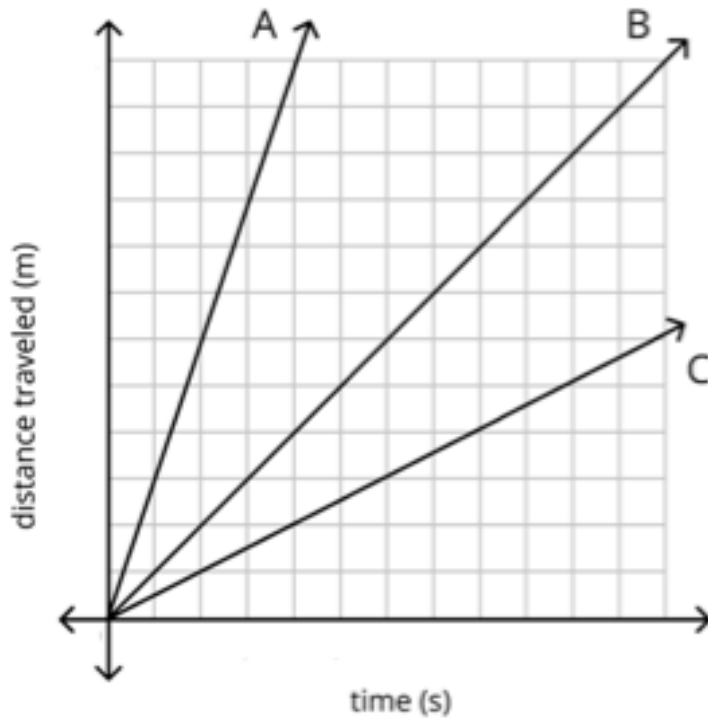
A line passes through the point (2, 10) and has a y-intercept of 4. Which of the following equations represents the line?

- (A)  $y = 2x + 4$
- (B)  $y = 3x + 4$
- (C)  $y = 4x + 4$
- (D)  $y = 10x + 4$

### Question 3

At a track in the park, Rachel ran while Seth jogged and Quincy walked. Rachel moved three times as fast as Seth, and Seth moved twice as fast as Quincy.

*Part 1* Label the graphed lines for Rachel, Seth and Quincy below.



A is \_\_\_\_\_

B is \_\_\_\_\_

C is \_\_\_\_\_

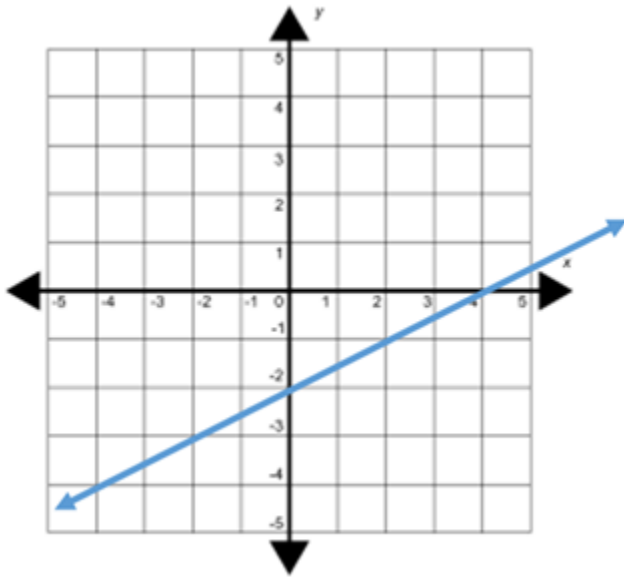
*Part 2* Seth jogged at a rate of 2 meters per second. The equation  $y = 2x$  represents his total distance traveled  $y$  and seconds  $x$ .

Which equation represents Rachel's total distance traveled  $y$  and seconds  $x$ ?

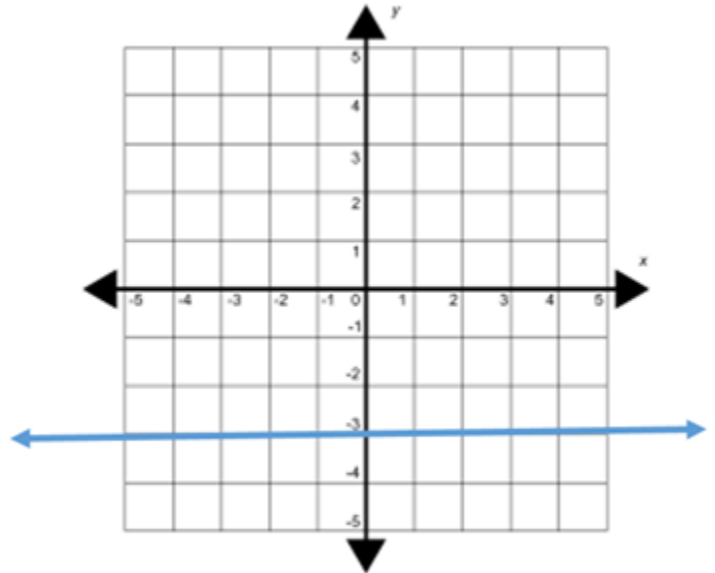
- (A)  $y = x$
- (B)  $y = 3x$
- (C)  $y = 4x$
- (D)  $y = 6x$

Question 4

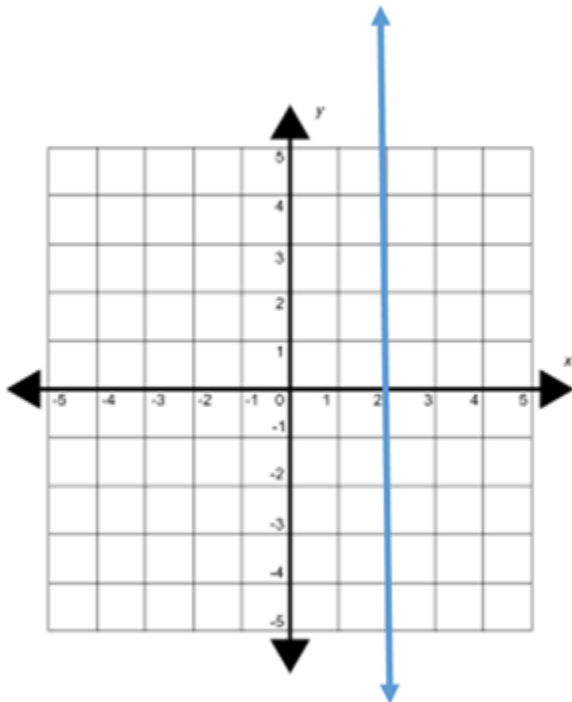
Write an equation for each of the four lines shown.



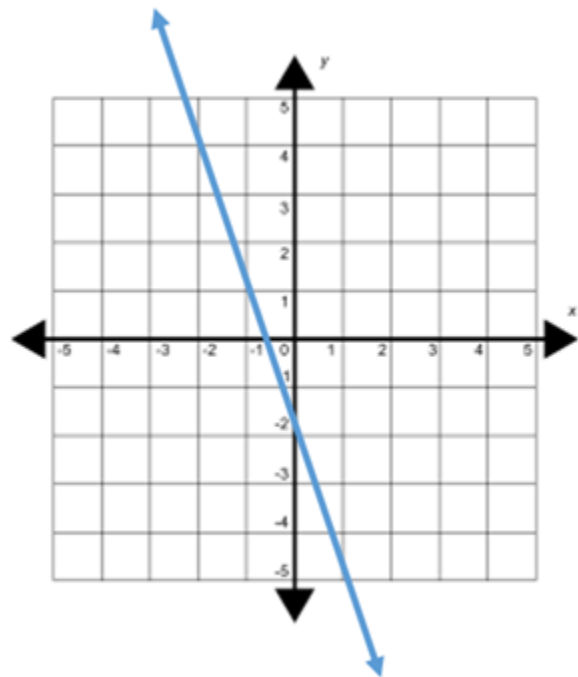
Equation:



Equation:



Equation:

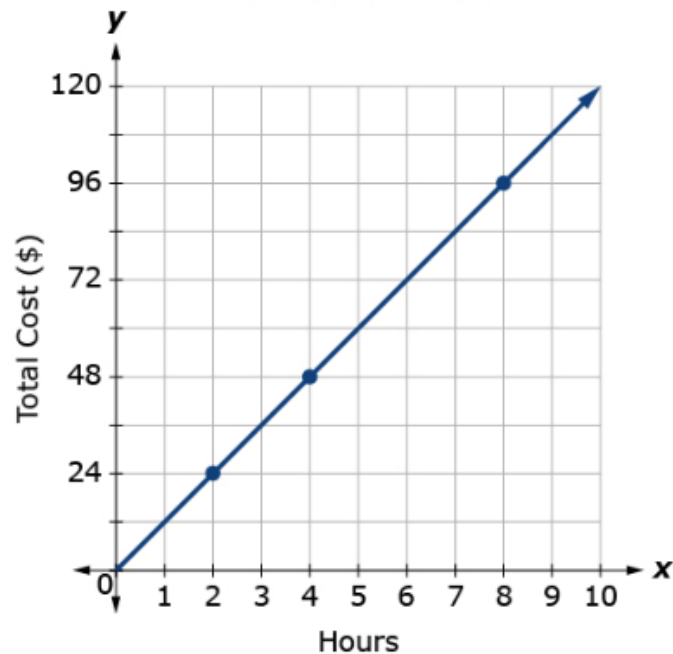


Equation:

### Question 5

Three different bike rental companies charge their customers hourly rates as shown below.

**Company #1** charges a cost of  $c$  dollars for  $h$  hours, as shown in the graph.



**Company #2** charges  $c$  dollars for  $h$  hours, as shown by the equation:

$$c = 15h$$

**Company #3** charges  $c$  dollars for  $h$  hours, as shown by the table:

Cost (\$)	0	20	40	80
Hours	0	2	4	8

*Part 1* Which company is the least expensive?

*Part 2* Which company is the most expensive?

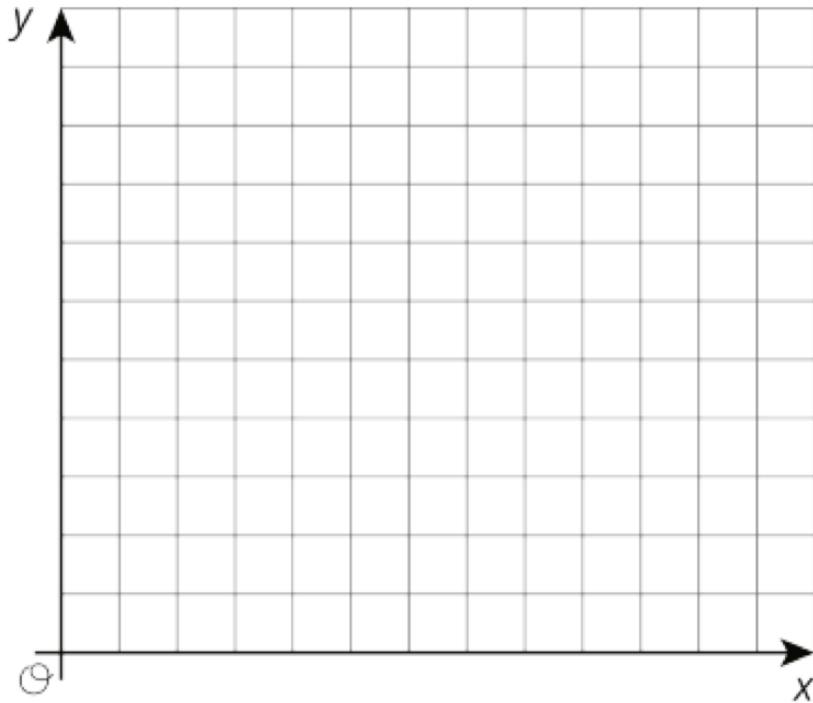
### Question 6

Damian began with a certain amount of money in his bank account. He then started saving the same amount of money each month. The table below shows the total amount in his account (initial deposit plus monthly additions) after a series of months.

Total in Account (\$)	425	450	475	500
Number of Months	1	2	3	4

*Part 1*      How much does Damian save each month?

*Part 2*      Graph Damian's bank account balance with dollars on the  $y$ -axis and months from the initial deposit on the  $x$ -axis.



*Part 3* Write an equation for Damian's bank account balance that shows total amount in dollars  $y$ , per months,  $x$ .

*Part 4* Is there a proportional relationship between the bank balance and time? Explain how you know.

*Part 5* Elijah starts with \$100 in his bank account and saves \$50 every month. On the same graph above, graph Elijah's bank account balance.

*Part 6* Write an equation for Elijah's bank account balance that shows total amount in dollars  $y$ , per months,  $x$ .