

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PER. \_\_\_\_\_

**DIRECT VARIATION**

Determine if the relationship is a direct variation. If so, write the equation.

1.

|   |    |   |   |
|---|----|---|---|
| x | 10 | 5 | 2 |
| y | 12 | 7 | 4 |

2.

|   |    |    |    |
|---|----|----|----|
| x | -6 | 3  | 12 |
| y | 4  | -2 | -8 |

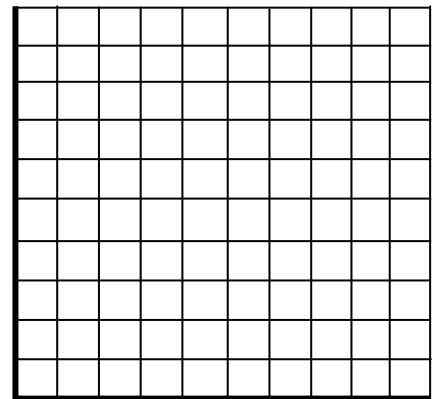
3.

|    |    |
|----|----|
| x  | y  |
| 6  | 8  |
| 8  | 10 |
| 10 | 12 |

4.

|    |     |
|----|-----|
| x  | y   |
| 2  | 0.8 |
| 5  | 2   |
| 20 | 8   |

5. While on his way to school, Norman saw that the cost of gasoline was \$3.00 per gallon. Write a direct variation equation to describe the cost  $y$  of  $x$  gallons of gas. Then graph.



6. The area a painter can paint varies directly with the amount of time he works. One morning, he painted 200 ft<sup>2</sup> between 8:00 a.m. and 1:00 p.m. Write a direct variation equation to describe the area  $y$  covered in  $x$  hours.

7. The mass of a substance varies directly with the volume of the substance. The volume of 80 kilograms of a substance is 60 liters. What is the volume in liters of 3.2 kilograms of the substance?

\_\_\_\_\_ 8. If  $y$  varies directly as  $x$ , and  $y$  is 42 when  $x$  is 12, which of the following represents this situation?

A.  $y = 30x$

B.  $y = 54x$

C.  $y = \frac{7}{2}x$

D.  $y = \frac{2}{7}x$

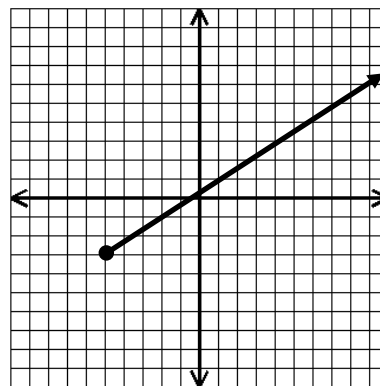
\_\_\_\_\_ 9. What is the range of the graph shown?

A.  $x \geq -5$

B.  $y \geq -5$

C.  $x \geq -3$

D.  $y \geq -3$



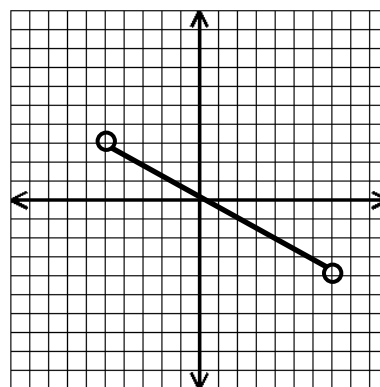
\_\_\_\_\_ 10. What is the domain of the graph shown?

A.  $-5 < x < 7$

B.  $-5 < x < 3$

C.  $-4 < x < 7$

D.  $-4 < x < 3$



Answers in random order: Yes,  $y = \frac{2}{5}x$ ; C,  $y = 40x$ , A, Yes,  $y = -\frac{2}{3}x$ ;  $y = 3x$ , No, D, No, 2.4