

# Chapter 3 Practice Test

## Multiple Choice

For each question, select the best answer.

1. The  $y$ -intercept for  $y = \frac{-1}{7}x + 2$  is:

- A -1
- B 2
- C 7
- D  $\frac{-1}{7}$

2. The slope and the  $y$ -intercept for  $y = 0.45x - 0.25$  are:

- A  $m = 0.45, b = 0.25$
- B  $m = -0.45, b = -0.25$
- C  $m = -0.45, b = 0.25$
- D  $m = 0.45, b = -0.25$

3. The equation for the line with slope  $-3$  and  $y$ -intercept  $4$  is:

- A  $y = -3x + 4$
- B  $y = -3x - 4$
- C  $y = -4x + 3$
- D  $y = -4x - 3$

4. The rate of change for  $y = 9 - 2x$  is

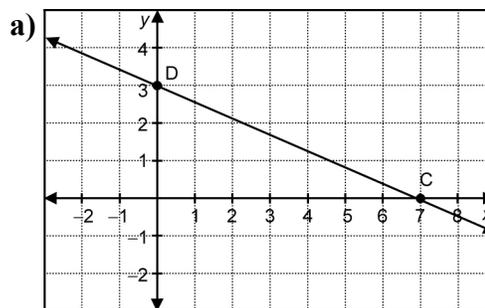
- A 2
- B 9
- C  $-9$
- D  $-2$

5. The equation of the line through  $A(-1, -3), B(0, -1)$  is

- A  $y = -2x + 1$
- B  $y = 2x + 1$
- C  $y = -2x - 1$
- D  $y = 2x - 1$

## Short Response

6. Determine the rise and the run then calculate the slope of the line segment.



7. On grid paper, graph each linear relation.

- a)  $y = 5 - x$
- b)  $y = -9x$
- c)  $y = x$
- d)  $y = x + 4$

8. Refer to your graphs from question 7.

- a) Identify the lines that have a positive slope.
- b) Identify the lines that have a negative slope.
- c) Identify the  $y$ -intercept of each line.
- d) Write an equation for a line that is parallel to each line.

9. a) Determine whether the lines represented by the tables of values are parallel.

| $x$ | $y$ |
|-----|-----|
| 0   | -5  |
| 1   | -10 |
| 2   | -15 |
| 3   | -20 |

| $x$ | $y$ |
|-----|-----|
| 0   | 0   |
| 1   | -1  |
| 2   | -2  |
| 3   | -3  |

b) Write an equation for each line.

10. Solve for the values of  $y$ , given the values of  $x$ .

- a)  $y = -0.25x$ , when  $x = -4$  and  $x = 8$
- b)  $y = 5 - 3x$ , when  $x = -1$  and  $x = 0$

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

Date: \_\_\_\_\_

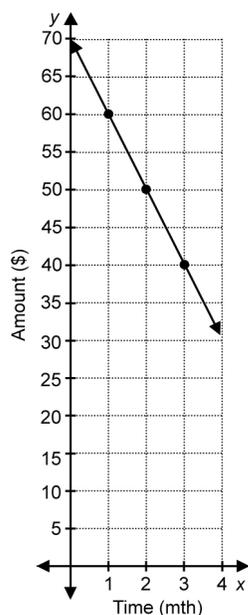
11. Write an equation for the line passing through each pair of points.

- a) C(0, -4), D(-5, -14)
- b) E(4, -2), F(-5, 7)

12. Determine the equation of the line given the slope and the coordinates of one point on the line.

- a)  $m = -2$ , N(0, -1)
- b)  $m = 0.25$ , G(0, 2)

13. Katharine's parents gave her \$70 to spend on school supplies throughout the school year. She spends about \$10 on school supplies each month. The graph shows the amount of money she has left over time.



- a) Determine the slope of the line.
- b) Identify the  $y$ -intercept.
- c) Write an equation that represents the amount of money Katharine has each month.
- d) How many months until Katharine has \$0 left?

**Extended Response**

14. Warren makes a 10% commission on every pair of shoes he sells. Each pair of shoes costs about \$80.

a) Complete the table.

| Pairs of Shoes Sold | Earnings (\$) |
|---------------------|---------------|
| 0                   | 0.00          |
| 1                   |               |
| 2                   |               |
| 3                   |               |
| 4                   |               |

- b) Determine the rate of change in Warren's earnings for each pair of shoes sold.
- c) Graph the data from the table.
- d) Write an equation to represent the earnings made for each pair of shoes sold.
- e) How many pairs of shoes does Warren have to sell in order to earn a commission of \$96.