

Unit 2 Review

Name: _____

Date: _____

1. Find the slope of the line containing the points $(-3, 8)$ and $(-1, 0)$.

A. -4 B. $-\frac{1}{4}$ C. zero slope
D. undefined slope

2. Examine the data in the table.

x	-3	-1	1	4
y	2	8	14	23

What is the slope of the line that contains these data points?

A. 6 B. $\frac{1}{3}$ C. 3 D. $\frac{1}{6}$

3. Consider the line passing through the coordinates $(2, 7)$ and $(-2, 5)$. Where does the line intersect the x - and the y -axis?

A. x -axis: $(-12, 0)$ y -axis: $(0, 3)$
B. x -axis: $(-12, 0)$ y -axis: $(0, 6)$
C. x -axis: $(12, 0)$ y -axis: $(3, 0)$
D. x -axis: $(-2, 0)$ y -axis: $(0, 5)$

4. Consider the graph of $3x + 2y = 5$. Where does the line intersect the x - and y -axis?

A. x -axis: $\frac{5}{2}$ y -axis: $\frac{5}{3}$
B. x -axis: $\frac{5}{2}$ y -axis: $-\frac{5}{3}$
C. x -axis: $\frac{5}{3}$ y -axis: $-\frac{5}{2}$
D. x -axis: $\frac{5}{3}$ y -axis: $\frac{5}{2}$

5. What is the slope of the line $3x - 2y = 4$?

A. $-\frac{2}{3}$ B. $\frac{2}{3}$ C. $\frac{3}{2}$ D. 3

6. Determine the y -intercept of the equation $-3x + 4y = 20$.

A. $\frac{20}{3}$ B. $-\frac{3}{4}$ C. 5 D. $-\frac{20}{3}$

7. An air conditioner is switched on at 1:00 pm. By 3:30 pm, the room temperature had dropped from 82°F to 72°F . Find the average rate of change in the temperature of this room over this period.

A. -5°F/hr B. -4°F/hr
C. $-\frac{1}{2}^\circ\text{F/hr}$ D. 5°F/hr

8. On June 1, Bonnie's car had 23,825 miles. On September 1, her car had 24,385 miles. What is the average rate of change?

- A. $\frac{280}{3}$ miles per month
- B. $-\frac{280}{3}$ miles per month
- C. $-\frac{560}{3}$ miles per month
- D. $\frac{560}{3}$ miles per month

9. Study the functions.

Function R

A radio station collects pledges from sponsors. One day, sponsors pledged lump sums that totaled \$500. Other sponsors pledged \$10 per month. The total pledges received, P , can be represented as a function of months, m , by the equation $P = 500 + 10m$.

Function S

Joy has \$340 in a savings account. She withdrew \$5 each month to pay off a clothing store account. The table shows the amount remaining in savings, y , as a function of months, x .

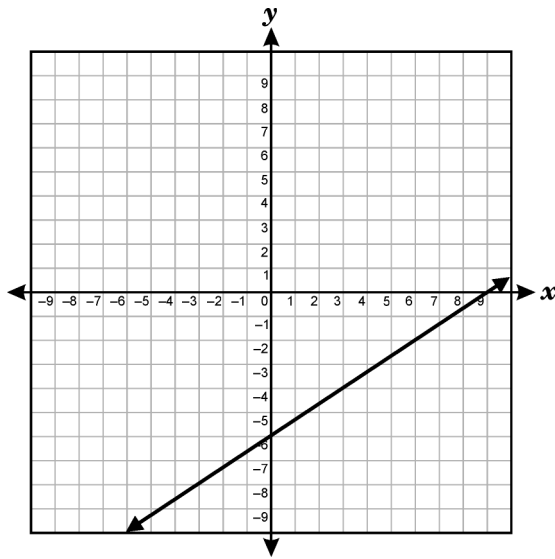
x	y
0	340
1	335
2	330
3	325

Which function has a negative slope?

- A. Function S has a negative slope since its slope is -340 .
- B. Function R has a negative slope since its slope is 10.
- C. Function S has a negative slope since its slope is -5 .
- D. Function R has a negative slope since its slope is 500.

10. Look at the functions.

Function L



Function M

x	y
-3	4
0	6
3	8
6	10

Compare the functions.

- A. Function L and Function M describe the same function since they both have y -intercepts of 6.
- B. Function L and Function M describe the same function since they both have slope of $\frac{2}{3}$.
- C. Function L has a y -intercept of -6 , Function M has a y -intercept of 6, so the functions are not the same.
- D. Function L has a slope of $\frac{2}{3}$ but Function Q has a slope of $\frac{3}{2}$, so the functions are not the same.

11. A line has a slope of 4. What is the slope of any line perpendicular to this line?

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

12. What is the slope of all lines parallel to the line $4x - 5y = -1$?

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

13. What is the slope of all lines perpendicular to the line $2x + 3y = 6$?

- A. $-\frac{3}{2}$ B. $-\frac{1}{2}$ C. $\frac{2}{3}$ D. $\frac{3}{2}$

14. Which is true about the following two lines?

$$2x + 4y = 7$$
$$x + 2y + 4 = 0$$

- A. They are parallel.
B. They are perpendicular.
C. They are coincident.
D. They are not parallel nor perpendicular.

15. What is the slope-intercept form of the equation of the line containing the point $(1, 6)$ and having slope -2 ?

- A. $y = -2x + 13$ B. $y = -2x + 8$
C. $y = -2x + 4$ D. $y = -2x - 4$