Linear Equations Summative Review

Name _____

1. What is the y-intercept?

A) y-int (0, 2)

B) y-int (0, -2)

C) y-int (0, 3)

D) y-int (2, 0)

2. What is the equation of the given graph?

A) y = -2x – 3

B) y = – x + 3

C) $y = \frac{1}{2}x - 3$

D) y = x – 3

3. Which equation has a slope of $\frac{1}{4}$ and a y-intercept of 3?

A) $y = -\frac{1}{4}x + \frac{1}{3}$ B) $y = \frac{1}{4}x + 3$

C) $y = \frac{1}{4}x - 3$ D) $y = 3x + \frac{1}{4}$

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4. Which of the following best presents the graph of a line with a slope of $\frac{2}{3}$ and a y-intercept of -1?

A).

B).

C).

D).

5. Graph a line with a slope of 2 and goes through the point (-1, 3).

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6. Which graph has the slope = $-\frac{1}{2}$?

A).

B).

C).

D).

7. Which is **true** about the given line?

A). It has a slope of $\frac{3}{2}$ and goes through $(-1,1)$.

B). It has a slope of $\frac{2}{3}$ and goes through $(1,4)$.

C). It has a slope of $\frac{3}{2}$ and goes through $(-3,-2)$.

D). It has a slope of $\frac{2}{3}$ and goes through $(2,-4)$.

Identify the slope and y-intercept for each equation or graph.

8. $y = 2x - 7$

Slope:

y – intercept:

9. $y = -\frac{1}{3}x + 3$

Slope:

y – intercept:

10. $y = x + 2$

Slope:

y – intercept:

11. $y = -2$

Slope:

y – intercept:

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12.

Slope:

y – intercept:

13.

Slope:

y – intercept:

Write an equation of a line in slope – intercept form for each of the following.

14. Slope: 4 y – intercept: -3

15. Slope: $-\frac{2}{5}$ y – intercept: -2

16. Slope: 0 y – intercept: -1

17. Slope: $\frac{5}{9}$ y – intercept: 0

18. Slope: -1 y – intercept: 7

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19. Consider lines p, q, and r graphed at the right.

a. Which line has a slope of $\frac{5}{2}$? _____ (use the letter)

b. Which line has a slope of $-\frac{5}{2}$? _____ (use the letter)

c. Which line has a slope of zero? _____ (use the letter)

20. Write the linear equation for each of the following:

a. through the point (-4,0) with a slope of 8

b. through the point (6,8) with a slope of $\frac{3}{4}$

c. through the point (0,6) with a slope of -245.6

d. slope: -1 y – intercept: $\frac{1}{2}$

e. slope: 1 y – intercept: -4

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21.

x	y
5	-4
-5	-6
-15	-10

Slope:

y – intercept:

Equation:

Create an equation from the two given points.

22. $(4,7)\,\&\,(5,1)$

Slope:

y – intercept:

Final equation:

23. $(9,-2)\,\&\,(-3,2)$

Slope:

y – intercept:

Final equation:

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24. $(9,2)\,\&\,(3,-1)$

Slope:

y – intercept:

Final equation:

25. $(-4,8)\,\&\,(-2,0)$

Slope:

y – intercept:

Final equation:

26.

x	y
12	2
9	4
6	6
3	8

Slope:

y – intercept:

Equation:

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27. Which is the slope for the points $(-5,9)$ & $(-7,-5)$?

A). 0

B). Undefined.

C). $\frac{14}{10}$

D). 7

28. Graph the equation: $y = -\frac{2}{5}x$

29. Graph the equation: $y = -x + 3$

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30. Graph each of the following:

a. through the point (-7,5)

Slope: 3

b. through the point (9,0)

Slope: $-\frac{5}{6}$

Graph each of the following equations.

31. $y = x - 4$

32. $y = -\frac{2}{3}x + 4$

33. $y = 2x - 3$

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34. Student council is selling T-shirts during spirit week. It costs $15 for the design and $5 to print each shirt.

What is the **x** or independent variable?

What is the **y** or dependent variable?

Slope:

y – intercept:

Equation:

What would it cost for the student council to print 350 shirts? Show your work.

35. There is currently 9 inches of snow on the ground. With the thunderstorms today the snow will melt at a rate of 1.5 inches per hour.

What is the **x** or independent variable?

What is the **y** or dependent variable?

Slope:

y – intercept:

Equation:

After how many hours would all of the snow be melted? Show your work.