Quiz #7: Finding the Equation of a Line

A. True or False

Write True if the statement is true or False if it is false. One point each.

1. The x-intercept of the line that passes through $(-4, 0)$ is -4.
2. The y-intercept of the line that passes through $(0, 3)$ is 0.
3. The y-intercept of the line that passes through the origin is 0.
4. The x-intercept of the line that passes through $(-4, 0)$ is -4.
5. The y-intercept of the line that passes through $(0, 5)$ is 0.

B. Point-Slope Form

Find the equation of the line given each information. Choose the answer from the box. Write the letter only. One point each.

a. $y = -4x$	d. $y = -\frac{2}{3}x - \frac{5}{3}$
b. $y = \frac{3}{2}x - 2$	e. $y = 3x - 4$
c. $y = -3$	

6. slope equal to 3; passes through point $(1, -1)$
7. slope equal to $\frac{3}{2}$; passes through point $(0, -2)$
8. slope equal to -4; passes through the origin
9. parallel to the line $y = -\frac{2}{3}x - 3$; passes through point $(2, -3)$
10. slope equal to 0; passes through point $(0, -3)$

C. Two-Point Form

Find the equation of the line given each information. Choose the answer from the box. Write the letter only. One point each.

a. $y = -\frac{3}{2}x + \frac{1}{2}$	d. $y = \frac{x}{4} - \frac{13}{4}$
b. $y = 2x - 2$	
c. $y = -\frac{5}{3}x + \frac{1}{3}$	e. $y = 10x - 24$

11. passing through points $(3, 6)$ and $(2, -4)$
12. passing through points $(0, -2)$ and $(1, 0)$
13. passing through points $(-1, 2)$ and $(3, -4)$
14. passing through points $(-3, -4)$ and $(1, -3)$
15. passing through points $(2, -3)$ and $(-1, 2)$

D. Two-Intercept Form

Find the equation of the line given each information. Choose the answer from the box. Write the letter only. One point each.

a. $4x + 3y = 12$	d. $2x + y = -4$
b. $3x - y = 3$	
c. $3x - 4y = 12$	e. $2x + 7y = 14$

16. passes through points $0, 2$ and $7, 0$
17. has the x-intercept $a = 3$ and y-intercept $b = 4$
18. passes through points $0, -3$ and $4, 0$
19. has the x-intercept $a = 1$ and y-intercept $b = -3$
20. has the x-intercept $a = -2$ and passes through $(0, -4)$

E. Slope-Intercept Form

Find the equation of the line given each information. Choose the answer from the box. Write the letter only. One point each.

a. $y = -\frac{1}{2}x - 7$	c. $y = -3x - 4$
	d. $y = 4x - 3$
b. $y = \frac{2}{3}x + 5$	e. $y = \frac{1}{3}x + 2$

21. slope is $\frac{2}{3}$ and y-intercept is 5 $y = \frac{2}{3}x + 5$
22. slope is 4 and passes through $(0, -3)$ $y = 4x - 3$
23. slope is $-\frac{1}{2}$ and y-intercept is -7 $y = -\frac{1}{2}x - 7$
24. slope is $\frac{1}{3}$ and passes through $(0, 2)$ $y = \frac{1}{3}x + 2$
25. slope is -3 and y-intercept is -4 $y = -3x - 4$