Quiz #6: Graphs of Linear Equations

A. True or False

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

1. The x-intercept of $3x = 1 - y$ is $\frac{1}{3}$.
2. The x-intercept of $4x - 2 = y$ is $\frac{1}{2}$.
3. The y-intercept of $3x = 1 - y$ is -1.
4. The y-intercept of $4x - 2 = y$ is 2.
5. The y-intercept of $y = -x + 1$ is -1.

B. Slope-Intercept form to Standard form

Rewrite each equation in the form $Ax + By = C$. Choose the answer from the box. Write the letter only. One point each.

a. $9x - 7y = -7$
b. $x - 3y = 6$
c. $4x - y = 1$
d. $3x - 2y = -16$
e. $6x + 5y = -15$

6. $y = \frac{1}{3}x - 2$
7. $y = \frac{3}{2}x + 8$
8. $y = \frac{9}{7}x + 1$
9. $y = -\frac{6}{5}x - 3$
10. $y = 4x - 1$

C. Converting to Slope-Intercept form

Rewrite each equation in the form $y = mx + b$. Choose the answer from the box. Write the letter only. One point each.

a. $y = -\frac{3}{4}x + \frac{15}{2}$
b. $y = -\frac{2}{3}x + 6$
c. $y = \frac{2}{3}x - 4$
d. $y = -\frac{42}{5}x + \frac{63}{5}$
e. $y = \frac{5}{4}x + 5$

11. $3y - 2x = -12$
12. $4y - 5x = 20$
13. $2x + 3y = 18$
14. $6x + \frac{5}{7}y = 9$
15. $\frac{1}{2}x + \frac{2}{3}y = 5$

D. Finding the Slope of a Line

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

a. 1	d. -2
b. 2	
c. 3	e. $\frac{1}{2}$

16. $y = -2x - 1$
17. $y = 3x$
18. $y = \frac{1}{2}x + 3$
19. $-2x + y = 3$
20. $x - y = 5$

E. Describing Graphs of Linear Equations

Using the slope, describe the graph of each equation. Choose the answer from the box. Answers may be repeated. Write the letter only. One point each.

a. Rising from left to right	c. Horizontal line
b. Falling from left to right	d. Vertical line

21. $y = -2x - 1$
22. $y = 3x$
23. $y = 3$
24. $-2x = 6$
25. $x - y = 5$