

I. Multiple Choice

- \_\_\_\_\_ 1. Which is the solution of  $x - 1 \leq 3x + 7$  ?  
(A)  $x \leq -4$  (B)  $x \leq 4$  (C)  $x \geq -4$  (D)  $x \geq 4$
- \_\_\_\_\_ 2. What is the slope of the line that passes through (4, -6) and (10, 2)?  
(A)  $\frac{4}{3}$  (B)  $-\frac{4}{3}$  (C)  $-\frac{3}{4}$  (D)  $\frac{3}{4}$
- \_\_\_\_\_ 3. Which of the following is **not** a function?  
(A)  $\{(1, 2), (-2, 2), (3, 3)\}$   
(B)  $\{(3, 2), (-2, 6), (3, 3)\}$   
(C)  $\{(2, 6), (-2, -3), (4, 3)\}$   
(D)  $\{(1, 3), (2, 3), (4, 3)\}$
- \_\_\_\_\_ 4. Given the equation of a line,  $y = 2x - 7$ , what is the slope of that line?  
(A) 1 (B) -2 (C) -7 (D) 2
- \_\_\_\_\_ 5. Given the line  $2x + 3y = 4$ , what is the y-intercept?  
(A) -4 (B)  $\frac{4}{3}$  (C)  $-\frac{2}{3}$  (D)  $-\frac{4}{3}$

II. Solve and Check each equation. SHOW WORK ON YOUR OWN PAPER.

6.  $|x - 2| = 4$

7.  $|2x + 3| = 7$

8.  $|3x - 2| = 7x$

III. Solve and graph each inequality. SHOW ALL WORK ON YOUR OWN PAPER.

9.  $8x - 1 < 6 + 13x$

10.  $2x - 5 \leq -13$  or  $x + 4 \geq 8$

11.  $3x > -15$  and  $4x - 1 < 23$

12.  $|2x + 7| > 5$

IV. Linear Equations

13. Write an equation of a line in slope-intercept form that passes through the points  $(-6, 6)$  and  $(9, 1)$ .

14. Determine the equation of a line that is parallel to the line  $y = 3x - 6$ , and passes through the point  $(1, 1)$ .

15. Determine the equation of the line which is perpendicular to the line  $y = -2x + 1$  and passes through the point  $(-1, 2)$ .

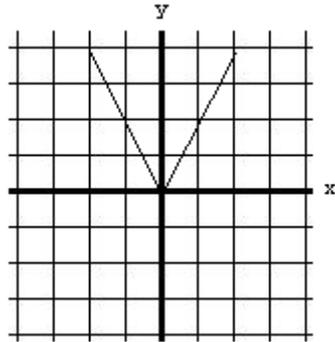
16. Write an equation of a line in point-slope form that passes through the point  $(2, 6)$  and has a slope of  $-3$ .

17. Which two of the following graphs are vertical translations of each other?

(A)  $y = 4x - 5$       (B)  $x + 4y = 5$       (C)  $4x - y = 2$

18. Write an equation of a line in standard form that passes through the point  $(-1, -3)$  and has slope  $m =$  .

19. Use the vertical line test to determine if the graph represents a function:



20. Determine the **domain** and **range** of the function  
 $P = \{(-1, -4), (0, -5), (3, 5), (6, 0)\}$

Extra Credit:

21. Determine the value of  $k$  such that the y-intercept of the line with equation  $3x + 2ky + 9 = 0$  is  $-6$ .