Test #1--Chapter 3

1-2. Graph each of the following equations on the grids provided.

1. \( y = -3x + 7 \)

2. \( 3x + 4y = 6 \)

3. Find the slope of the line containing the points (4,-7) and (-2, -1).

4. Find the distance between the points (5,-6) and (-3,1). (Do not convert to a decimal.)

5. Find an equation for the line containing the points (-5,-2) and (2,-7). Write your final answer in standard form.
6. Write an equation for the line containing (4,3) with a slope of $\frac{-2}{7}$. Leave the final answer in standard form.

7. Are the lines represented by the equations $3x + 5y = -12$ and $5x + 3y = 12$ parallel, perpendicular, or neither? Show how you arrive at your answer.

8. Find the equation of the line parallel to $y = -6x + 5$ passing through the point (2,-8).

9. Find the x- and y-intercepts of the line $6x + 8y = 14$.

10. Find the slope of the line $-3x + 7y = -4$. 
11. What would be the slope of any line perpendicular to \( y = \frac{4}{11}x - 9 \)?

12. A highway has a grade of 4%. How many feet does it rise in a horizontal distance of 250 feet?

13. For the line \( y = 8x - 5 \), the slope is _____ and the y-intercept is _________.

14. Graph the line \( y = -4 \).

15. Graph \( y \leq x + 2 \).

16. What is the slope of the line you drew in #14? ___________
Answers

1. 

2. 

3. -1 

4. $\sqrt{113}$ 

5. $5x + 7y = -39$ 

6. $2x + 7y = 29$ 

7. neither 

8. $y = -6x + 4$ or $6x + y = 4$ 

9. $\left(0, \frac{7}{4}\right)$ and $\left(\frac{7}{3}, 0\right)$ 

10. $\frac{3}{7}$ 

11. $-\frac{11}{4}$ 

12. 10 ft 

13. 8; (0, -5) 

14. 

15. 

16. 0