Name_____ Date _____ Period _____

DIRECTIONS: For #1-4, name the quadrant in which the points lie. Write your answers in the provided blanks using Roman numerals.

1. $(3, 5)$ **2.** $(-3, -5)$ **3.** $(-3, 5)$ **4.** $(3, -5)$

_____   _____   _____   _____

DIRECTIONS: For #5-7, find the slopes of the lines passing through the given points. Show all work. Write your answers in the provided blanks.

5. $(-3, 5), (6, 2)$ _____

6. $(-8, -3), (-5, 18)$ _____

7. $\left(\frac{1}{3}, \frac{5}{4}\right), \left(\frac{4}{3}, \frac{11}{4}\right)$ _____

DIRECTIONS: For #8-10, determine whether the lines from #5-7 (respectively) are **rising**, **falling**, **horizontal**, or **vertical**. Write the entire word in the provided blanks.

8. _____   **9.** _____   **10.** _____

DIRECTIONS: For #11-12, accurately describe the relationship between Line 1 & Line 2 as **parallel**, **perpendicular**, or **neither**. Write the entire word in the provided blanks.

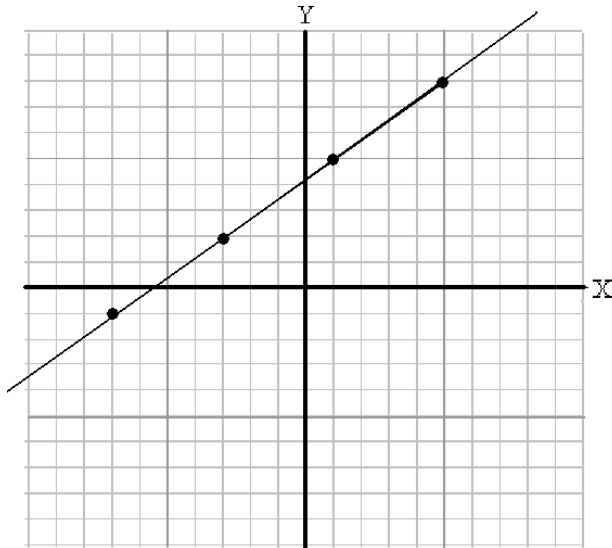**11.** Line 1: through $(0,8)$ and $(-6 ,0)$ _____
Line 2: through $(-7, 9)$ and $(-3, 6)$

12. Line 1: through $(-8, -2)$ and $(-5, 4)$ _____
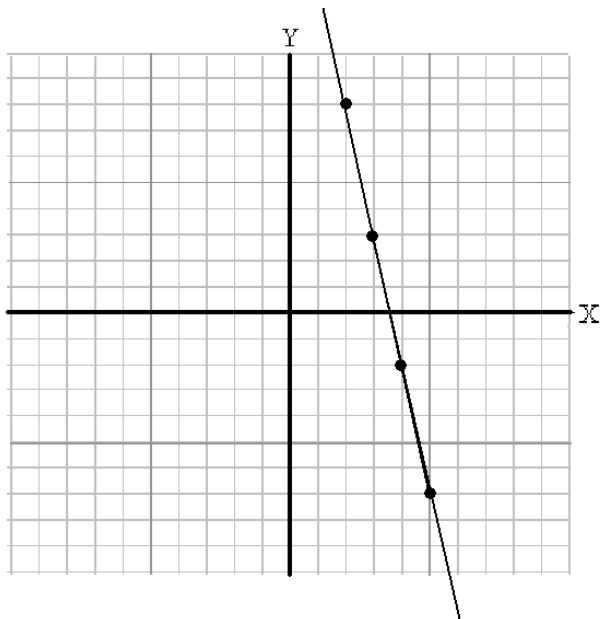Line 2: through $(0, 4)$ and $(1, 6)$

DIRECTIONS: For #13-14, determine the slopes of the lines on the graphs. Write your answers in the provided blanks.

13.

_____

14.

_____

DIRECTIONS: For #15-20, answer the questions. Write your answers in the provided blanks. Be sure to list all intercepts as ordered pairs.

15. What is the slope of the line $4x + 8y = 17$?   _____

16. What is the slope of the line $9x = 4y - 7$?   _____
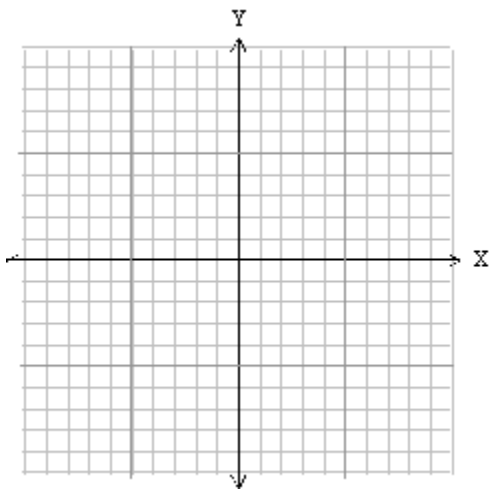
17. What is the slope of the line $y = -3x + 5$?   _____

18. What is the slope of the line $3y = 15$?   _____

19. What is the x-intercept of the line $2x - 7y = 14$?   _____
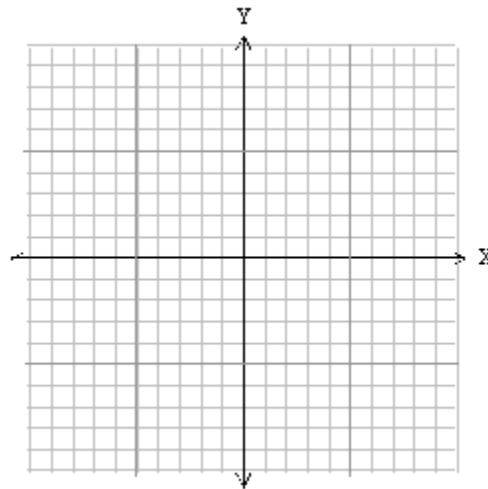
20. What is the y-intercept of the line $2x - 7y = 14$?   _____

DIRECTIONS: For #21-25, use the provided diagrams to accurately graph the given equations. Use a straightedge (such as a ruler) to make your lines.
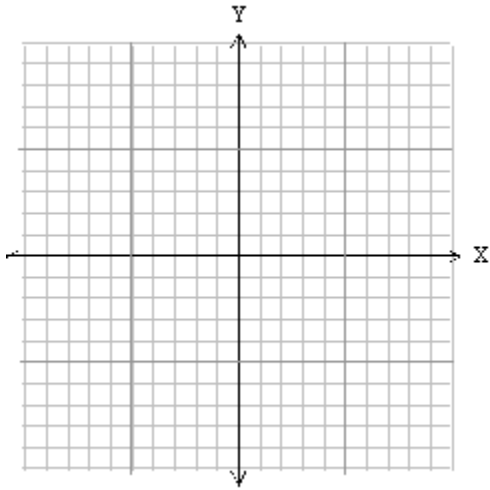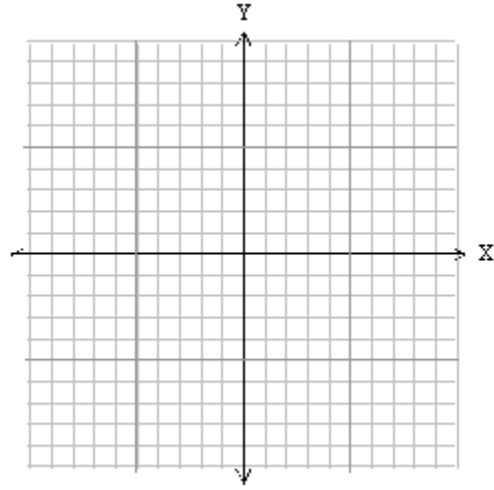
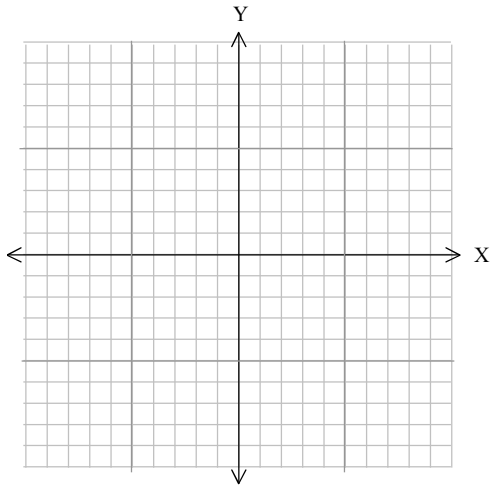**21.** $y = -4x + 5$ **22.** $y = \frac{3}{2}x - 6$

23. $y = 5$

24. $5x + 4y - 20 = 0$

25. $4x - 3y = -12$

<u>DIRECTIONS</u>: For #26-32, write an equation in **standard form** ($Ax + By = C$) for the lines that are determined by the given information. Show all work.

26. Slope is -2 and
y-intercept is $(0, -4)$

27. Contains (5, 6) and slope is $\frac{2}{3}$

_____   _____

28. Contains (2, 7) and (-3, 7)

29. Contains (5, 7) and (−3, 3)

_____   _____

30. Slope is $-\frac{5}{6}$ and y-intercept is (0, 0)

_____

31. Contains $(1, -5)$ and is parallel to the line $y = 2x + 8$

32. Contains $(2, 7)$ and is perpendicular to the line $y = -\frac{1}{6}x + 8$

_____   _____

DIRECTIONS: For #34, answer the question. Show all work. Remember to label your answer.

33. A ramp to a loading dock will be constructed with a slope of 2%. If the door is 8 feet above ground level, how long should the base of the ramp be?

_____