Name **Answers!**                              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.** $(3, -5)$

    **I**                 **III**               **II**               **IV**

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.** $(-3, 5), (6, 2)$                                     **$-\dfrac{1}{3}$**

**6.** $(-8, -3), (-5, 18)$                               **7**

**7.** $\left(\dfrac{1}{3}, \dfrac{5}{4}\right), \left(\dfrac{4}{3}, \dfrac{11}{4}\right)$                        **$\dfrac{3}{2}$**

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. falling**                 **9. rising**                 **10. rising**

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 $(-6 ,0)$              **Perpendicular**
      Line 2: through $(-7, 9)$ and $(-3, 6)$

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

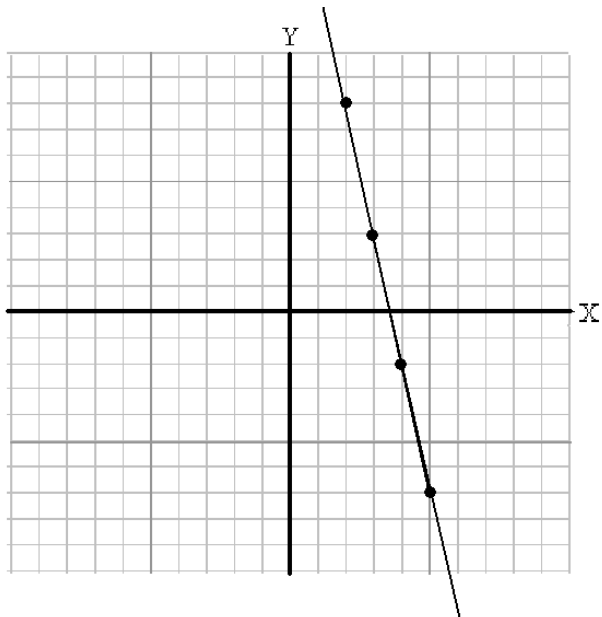DIRECTIONS: For #13-14, determine the slopes of the lines on the graphs.  Write your answers in the provided blanks.

**13.**

$\dfrac{3}{4}$
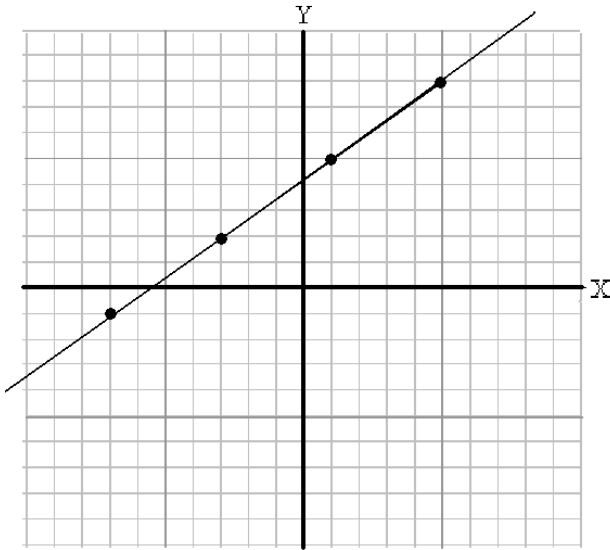
**14.**

$-5$

<u>DIRECTIONS</u>: 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 $4x + 8y = 17$ ?                    $-\dfrac{1}{2}$

**16.** What is the slope of the line $9x = 4y - 7$ ?                    $\dfrac{9}{4}$

**17.** What is the slope of the line $y = -3x + 5$ ?                    $-3$

**18.** What is the slope of the line $3y = 15$ ?                    $0$

**19.** What is the $x$-intercept of the line $2x - 7y = 14$ ?                    $(7, 0)$

**20.** What is the $y$-intercept of the line $2x - 7y = 14$ ?                    $(0, -2)$

<u>DIRECTIONS</u>: For #21-25, use the provided diagrams to accurately graph the given equations. Use a straightedge (such as a ruler) to make your lines.  **(Ignore the numbers beside the lines – they are from a previous review sheet)**
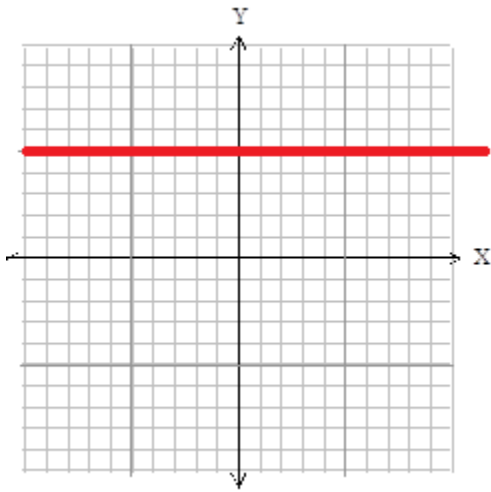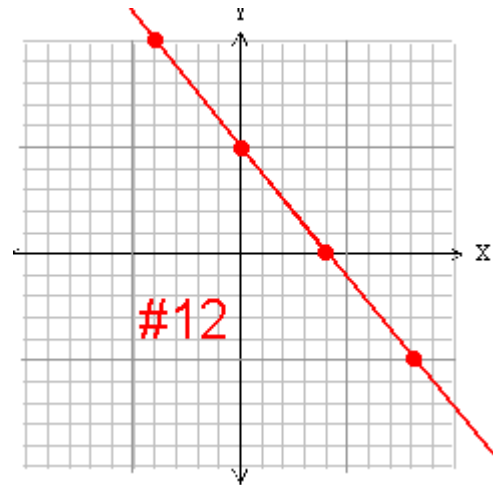
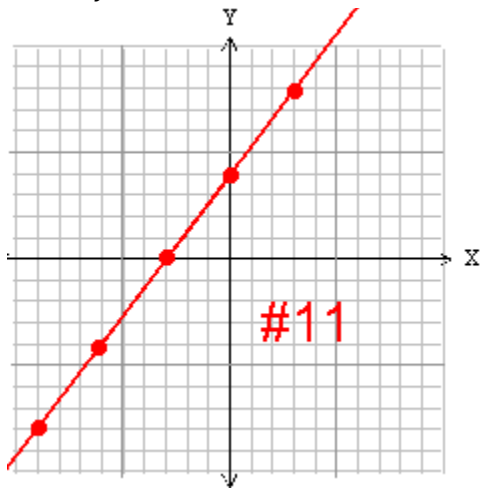**21.** $y = -4x + 5$
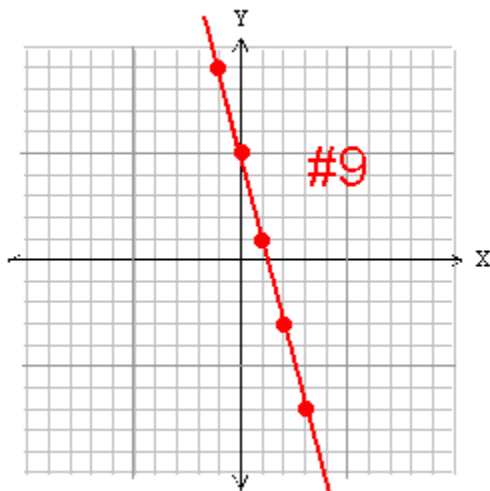


**22.** $y = \dfrac{3}{2}x - 6$

**23.** $y = 5$

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

#12

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

#11
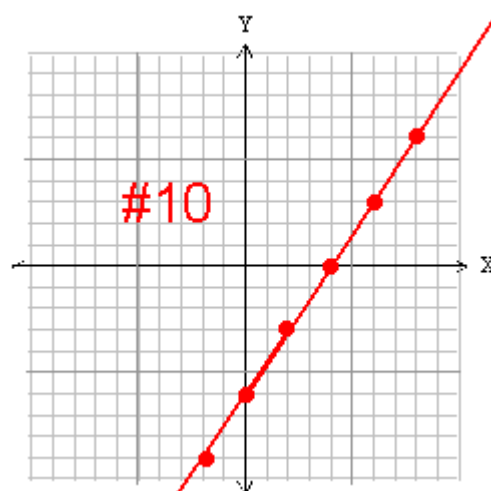
<u>DIRECTIONS</u>: For #26-32, write an equation in **standard form** ($Ax + By = C$) for the lines that are determined by the given information. Show all work.

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

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

$$\boldsymbol{2x + y = -4}$$

$$\boldsymbol{2x - 3y = -8}$$

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

**29.** Contains (5, 7) and (−3, 3)

$$\boldsymbol{y = 7}$$

$$\boldsymbol{x - 2y = -9}$$

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

$$\boldsymbol{5x + 6y = 0}$$

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

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

$$2x - y = 7 \qquad\qquad\qquad 6x - y = 5$$

DIRECTIONS:  For #33, 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?

**400 feet**