

## Assignment 23 ~ Algebra of Lines

Name: \_\_\_\_\_

1. Write the equation  $-2x - 4y = 16$  in slope intercept form.

6. Write the equation that describes the line with slope = 2 and y - intercept =  $\frac{3}{4}$  in slope intercept form.

2. Find the slope of the line that contains  $(-7, -6)$  and  $(-3, 10)$

7. Write an equation in slope-intercept form for the line that passes through  $(2, 5)$  and  $(3, 9)$ .

3. What is the slope of the line represented by the equation:  $x - 4y = 8$

8. Write an equation in slope-intercept form for the line perpendicular to  $y = -\frac{1}{3}x + 2$  that passes through the point  $(2, -4)$ .

4. Find the slope of a line perpendicular to the following line:  $y = \frac{2}{3}x + 4$

5. Write an equation in slope-intercept form for the line parallel to  $y = 2x - 5$  that passes through the point  $(-3, 4)$ .

9. Write an equation in point-slope form for the line with slope =  $-3$  that passes through the point  $(-2, 4)$ .

10.

Find the slope of the line that contains  $(11,7)$  and  $(5,4)$

11.

Write an equation in slope-intercept form for the line with slope  $= -\frac{3}{4}$  that passes through the point  $(-8,2)$ .

12.

Write the equation  $x - 3y = 15$  in slope intercept form.

13.

Find the slope of a line perpendicular to the following line:  $y = -2x + 6$

14.

What is the slope of the line represented by the equation:  $2x + 3y = -21$

15.

Write an equation in slope-intercept form for the line parallel to  $y = \frac{3}{2}x + 3$  that passes through the point  $(-6,-10)$ .

16.

Write an equation in slope-intercept form for the line that passes through  $(-3,2)$  and  $(1,-2)$ .

17.

Write the equation that describes the line with slope  $= -\frac{4}{3}$  and  $y$ -intercept  $= 5$  in slope intercept form.

18.

Write an equation in point-slope form for the line with slope  $= \frac{1}{3}$  that passes through the point  $(-9,2)$ .