Name:_____**Date:**_____**Per:**_____

Writing Equations of Lines In Slope-Intercept Form
Review

Slope – intercept form:

1. When a line is written in slope – intercept form, what two characteristics of a line can you identify?

   Slope (m) is always the coefficient of x and y-intercept (b) is always being added or subtracted

2. To write the equation of a line in slope – intercept form you must know what two things for your final answer?

   Slope and y-intercept

3. If you are given two points, which formula would you use to find the slope?

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

4. If you are given a graphed line, which formula, different than the one above, can you use to find the slope?

   $\frac{Rise}{Run}$ or $\frac{\Delta y}{\Delta x}$

5. If you are given a graphed line how can you visually identify the y – intercept?

   Look at where the line hits the y-axis

6. Other than never intersecting, what do you know about parallel lines?

   They have the same slope

7. Other than intersecting at right angles, what do you know about perpendicular lines?

   Their slopes are opposite reciprocals

Use the given information to write the equation of each line in slope-intercept form. Assume the line passes through any points given.

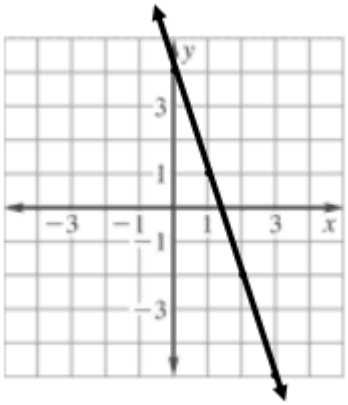
8. Slope: 8, *y*-intercept: –7

$y = 8x - 7$

9. (4, 17) and (0, 5)

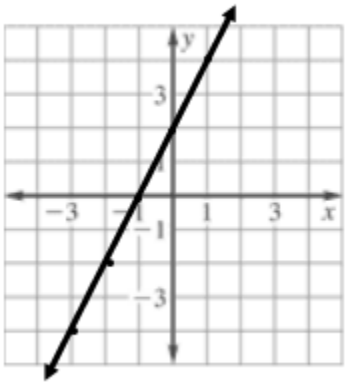
$y = 3x + 5$

10.



$y = -3x + 4$

11.



$y = 2x + 2$

12. Slope: 2, (6, 3)

$y = 2x - 9$

13. Slope: –4, (–1, 3)

$y = -4x - 1$

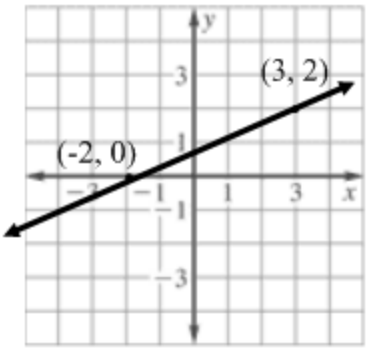
14. (1, –2), (–5, 4)

$y = -1x - 1$

15. $f(-2) = 10$, $f(4) = -2$

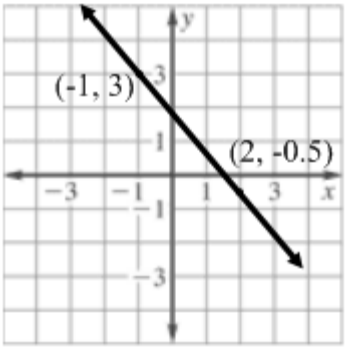
$y = -2x + 6$

16.



$y = \frac{2}{5}x + \frac{4}{5}$

17.



$y = -\frac{7}{6}x + \frac{11}{6}$

PARALLEL AND PERPENDICULAR LINES

Write the equation of the line using the given information. The line passes through any point given.

18. (–1, 3) $\parallel$ to $y = 2x + 2$

$y = 2x + 5$

19. (5, –1) $\parallel$ to $5y + 3x = 10$

$y = -\frac{3}{5}x + 2$

20. (5, 1) $\perp$ to $y = 5x - 2$

$y = -\frac{1}{5}x + 2$

21. (8, –1) $\perp$ to $4y + 2x = 12$

$y = 2x - 17$