

LEVEL: EMERGING

Directions: Write the following equations in slope-intercept form.

1) $2x + 8y = 16$

2) $10x - y = -2$

3) Identify the slope of the given line. Then determine what the slope of the parallel and perpendicular line would be.

$11y - 33x = 55$

Slope: _____

Slope of parallel line: _____

Slope of perpendicular line: _____

LEVEL: PROFICIENT

4) Write the equation of a line that passes through the point (5,7) that is parallel to the line $y = 2x - 1$.

Equation of the line: _____

5) Write the equation of a line that passes through the point (4,0) that is perpendicular to the line $y = \frac{4}{5}x + 2$.

Equation of the line: _____

6) Write the equation of a line that passes through the point (-3,8) that is parallel to the line $y = -\frac{10}{3}x + 20$.

Equation of the line: _____

7) Write the equation of a line that passes through the point (3,-9) that is perpendicular to the line $y = 3x - 11.2$.

Equation of the line: _____

Directions: Determine which lines, if any, are parallel or perpendicular.

8) Line 1: $y = 3x - 1$
Line 2: $y = \frac{1}{3}x + 4$
Line 3: $y = -\frac{1}{3}x - 2$

Parallel: _____ Perpendicular: _____

9) Line 1: $3x - 2y = 6$
Line 2: $y = \frac{3}{2}x + 8$
Line 3: $2y + 10 = -3x$

Parallel: _____ Perpendicular: _____

10) Are the two given lines perpendicular? Explain why or why not.

Line A: $y = x - 4$
 Line B: $-2x - 2y = -7$

Explanation: _____

Directions: Write the equation of the line with the given information. Then find the sum of the slope and the y-intercept.

11) Write the equation of a line that is parallel to the line $y = \frac{3}{5}x - 4$ and passes through the point $(-4, 6\frac{3}{5})$.

12) Write the equation of a line that is perpendicular to the line $y = -\frac{4}{7}x + 8$ and passes through the point $(8, 12)$.

Equation of the line: _____

Equation of the line: _____

Slope: _____ y-intercept: _____

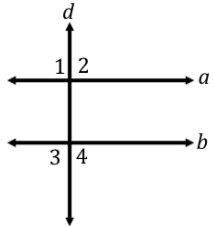
Slope: _____ y-intercept: _____

Sum: _____

Sum: _____

13) Write a two column proof for the following scenario.

Given: $\angle 1$ and $\angle 2$ form a congruent linear pair; $m\angle 3 = 90^\circ$
 Prove: Line a and b are parallel.



Statement	Reason