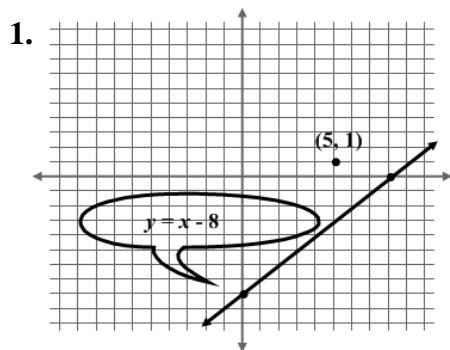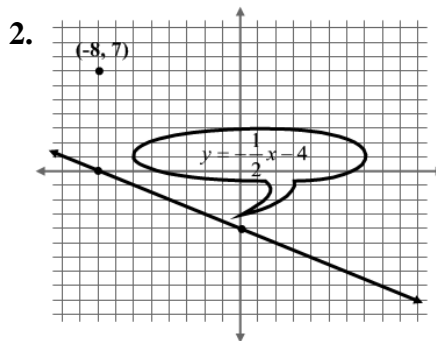# WRITING EQUATIONS OF PARALLEL AND PERPENDICULAR LINES
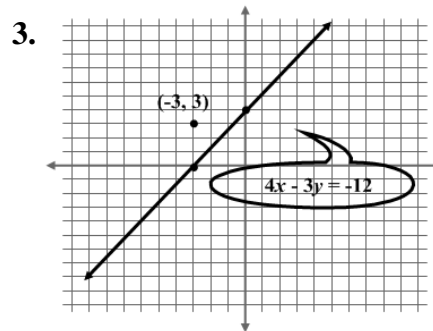**Worksheet 311**

Write the slope-intercept form for an equation of the line that passes through the given point and is parallel to the graph of each equation.

1.

$y = x - 4$

2.

$y = -\frac{1}{2}x + 3$

3.

$y = \frac{4}{3}x + 7$

4. $(-2, 2)$, $y = 4x - 2$

$y = 4x + 10$

5. $(6, 4)$, $y = \frac{1}{3}x + 1$

$y = \frac{1}{3}x + 2$

6. $(4, -2)$, $y = -2x + 3$

$y = -2x + 6$

7. $(-2, 4)$, $y = -3x + 10$

$y = -3x - 2$

8. $(-1, 6)$, $3x + y = 12$

$y = -3x + 3$

9. $(4, -6)$, $x + 2y = 5$

$y = -\frac{1}{2}x - 4$

10. Find an equation of the line that has a y-intercept of 2 that is parallel to the graph of the line $4x + 2y = 8$

$y = -2x + 2$

11. Find an equation of the line that has a y-intercept of -1 that is parallel to the graph of the line $x - 3y = 6$

$y = \frac{1}{3}x - 1$

12. Find the equation of the line that has a y-intercept of -4 that is parallel to the graph of the line $y = 6$

$y = -4$

WRITING EQUATIONS OF PARALLEL AND PERPENDICULAR LINES
Worksheet 312

Write the slope-intercept form for an equation of the line that passes through the given point and is perpendicular to the graph of each equation.

1. $(4, 2)$, $y = \frac{1}{2}x + 1$

$y = -2x + 10$

2. $(2, -3)$, $y = -\frac{2}{3}x + 4$

$y = \frac{3}{2}x - 6$

3. $(6, 4)$, $y = 7x + 1$

$y = -\frac{1}{7}x + \frac{34}{7}$ or

$y = -\frac{1}{7}x + 4\frac{6}{7}$

4. $(-8, -7)$, $y = -x - 8$

$y = x + 1$

5. $(6, -2)$, $y = -3x - 6$

$y = \frac{1}{3}x - 4$

6. $(-5, -1)$, $y = \frac{5}{2}x - 3$

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

7. $(-9, 5)$, $y = -3x - 1$

$y = \frac{1}{3}x + 8$

8. $(-1, 3)$, $2x + 4y = 12$

$y = 2x + 5$

9. $(6, -6)$, $3x - y = 6$

$y = -\frac{1}{3}x - 4$

10. Find the equation of the line that has a *y*-intercept of -2 and is perpendicular to the graph of the line $x - 2y = 5$.

$y = -2x - 2$

11. Find the equation of the line that has a *y*-intercept of 5 and is perpendicular to the graph of the line $4x + 3y = 8$.

$y = \frac{3}{4}x + 5$