Activity Sheet
Equations of Parallel and Perpendicular Lines through a Point

1. The equation for line c can be written as

$$y = \frac{1}{2}x + 6$$

Line d which is parallel to line c includes the point (-6, -4). What is the equation of line d?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

2. The equation of line s is

$$y = \frac{4}{3}x + 2.$$

Perpendicular to line s is line t, which passes through the point (8, -2). What is the equation of line t?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

3. The equation of line f is

$$y = -3x + 10.$$

Line g is parallel to line f and passes through (-3, 5). What is the equation of line g?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

4. The equation for line c can be written as

$$y = -\frac{1}{3}x - 7$$

Line d includes the point (-1,-4) and is perpendicular to line c. What is the equation of line d?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

5. The equation of line j is
$$y = -5x + 10$$
Parallel to line j is line k which passes through the point (2, -4). What is the equation of line k?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

6. Line p has an equation of

$$y = -\frac{5}{8}x + 2$$

Line q which is perpendicular to line p, includes the point (-1, -1). What is the equation of line q?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

7. Line g has an equation of

$$y - 7 = \frac{3}{10}(x - 9)$$

Parallel to line g is line h, which passes through the point (10, 7). What is the equation of line h?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

8. Line r has an equation of

$y + 1 = -4(x - 5)$

Line s is perpendicular to line r and passes through (-10, -3). What is the equation of line s?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

9. The equation of line g is

$y = -\dfrac{1}{2}x + 9$

Parallel to line g is line h, which passes through the point (1, 3). What is the equation of line h?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

10. Line t has an equation of

$y = -2x - 5$

Perpendicular to line t is line u, which passes through the point (10, -4). What is the equation of line u?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

11. Line q has an equation of

$y = -2x + 5$

Parallel to line q is line r, which passes through the point (-8, -8). What is the equation of line r?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

12. The equation for line s can be written as

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

Line t, which is perpendicular to line s, includes the point (-3, 9). What is the equation of line t?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

13. The equation of line p is

$y + 6 = -\dfrac{6}{5}(x + 5)$

Line q, which is parallel to line p, includes the point (-1, 2). What is the equation of line q?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

14. The equation for line k can be written as

$y + 8 = \dfrac{1}{7}(x - 1)$

Parallel to line k is line l, which passes through the point (-4, -2). What is the equation of line l?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.

15. Line j has an equation of
$6x + 2y = 9$.

Line k includes the point (-1, 8) and is parallel to line j. What is the equation of line k?
Write the equation in slope-intercept form. Write the numbers in the equation as proper fractions, improper fractions, or integers.