

1. Given the following lines, find the  $x$ - and  $y$ -intercepts. Plot the intercepts, then graph the line.

(a).  $y = 3x - 6$

(b).  $2x + 5y = 10$

(c).  $y = -5x + 10$

(d).  $y = 4$

(e).  $y = -2x - 3$

(f).  $3x - 4y = 12$

2. Find the slope of a line passing through the given points.

(a).  $(1, -1)$  and  $(2, -3)$

(b).  $(2, 4)$  and  $(-1, 4)$

(c).  $(-2, 5)$  and  $(3, 3)$

(d).  $(1, 3)$  and  $(1, 9)$

3. Write the equation of a line with the given information.

(a). Through the point  $(-2, 5)$  with a slope of  $-3$ .      (b). Through the point  $(0, 3)$  with a slope of  $\frac{2}{5}$ .

(c). Through the points  $(-1, 3)$  and  $(2, 8)$ .      (d). Through the points  $(-2, 1)$  and  $(-2, 5)$ .

(e). Through the point  $(5, 2)$  and parallel to  $2x - y = 4$ .

(f). Through the point  $(1, -6)$  and perpendicular to  $x = 4$ .

4. Determine whether the following pairs of lines are parallel, perpendicular, or neither.

(a).  $2x - 4y = 6$  and  $3x - 6y = 10$       (b).  $y = -\frac{1}{3}x + 7$  and  $2y - 6x = 4$

1. (a).  $(0, -6), (2, 0)$     (b).  $(0, 2), (5, 0)$     (c).  $(0, 10), (2, 0)$     (d).  $(0, 4)$  no  $x$ -int.    (e).  $(0, -3), (3/2, 0)$     (f).  $(0, -3), (4, 0)$

2. (a).  $-2$     (b).  $0$     (c).  $-2/5$     (d). undefined

3. (a).  $y = -3x - 1$     (b).  $y = \frac{2}{5}x + 3$     (c).  $y = \frac{5}{3}x + \frac{14}{3}$     (d).  $x = -2$     (e).  $y = 2x - 8$     (f).  $y = -6$

4. (a). parallel    (b). perpendicular