Practice on finding equations of lines

1. Put each of the following equations in slope intercept form. What is the slope and the y–intercept of the line with this equation?

   (a) $-12x + 3y = 11$

   (b) $x = 3y - 5$

   (c) $5x - 3y = 6$

   (d) $7x + 14y = 1$

2. Find an equation for the line that:

   (a) has slope -2 and y–intercept 3.

   (b) has slope $\frac{3}{7}$ and passes through $(0, 5)$.

   (c) has slope $-\frac{5}{2}$ and passes through $(-4, 3)$.

(d) has slope 5 and passes through $(4, 0)$.

(e) has the same slope as $y = \frac{x}{3} - 11$ and passes through $(-1, -3)$.

(f) passes through $(1, 2)$ and $(3, 4)$.

(g) passes through $(0, 3)$ and $(4, 5)$.

(h) passes through $(-1, 5)$ and $(6, 5)$.

(i) passes through $(1, 2)$ and $(1, -5)$.

3. Find an equation of the line that:

(a) is parallel to $3x - 4y = 6$ and passes through $(2, 3)$.

(b) is parallel to $5x + 4y = 7$ and passes through $(-1, 8)$.

(c) passes through $(-1, 6)$ and is perpendicular to $2x - 5y = 11$.

(d) is perpendicular to $x - 3y = -2$ and passes through $(0, 6)$.