****

**8-71.** For each equation below, solve for *x*.

c. (*x* + 10)(2*x* − 5) = 0 d. (*x* − 7)2 = 0

**8-72.** Examine the system of equations.            5*x* − 2*y* = 4  
*x* = 0

1. Before solving this system, Danielle noticed that the point of intersection is also the *y-*intercept of 5*x*− 2*y* = 4. Explain how she knows this.
2. Find the point of intersection of the two rules above.

**8-73.** The (*x*-intercepts) of the graph of *y* = 2*x*2 − 16*x* + 30 are (3, 0) and (5, 0).

* 1. What is the *x*-coordinate of the vertex? How do you know?
  2. Use your answer to part (a) above to find the *y*-coordinate of the vertex. Then write the vertex as a point (*x*, *y*).

**8-97.** Use any method to solve the systems of equations below.

* 1. 2x − 3y = 5  
     4x + y = 3
  2. m = −3 + 2n  
     4m + 6n = −5

**8-107.** Use factoring and the Zero Product Property to solve each equation.

1. (x − 4)(2x + 1) = 0
2. x2 + 5x + 6 = 0
3. x(2x − 5) = 0
4. x2 + 4x = 0