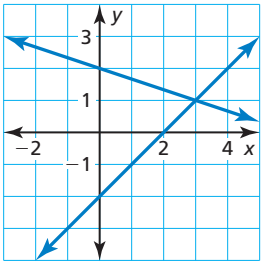
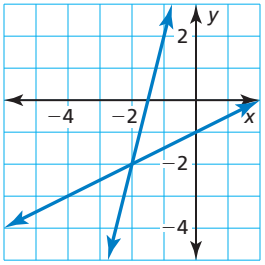
5.1–5.4 Quiz

Use the graph to solve the system of linear equations. Check your solution. *(Section 5.1)*

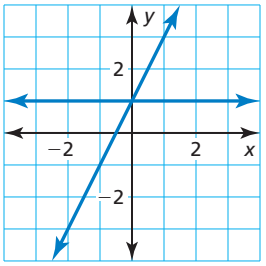
1. $y = -\frac{1}{3}x + 2$
$y = x - 2$



2. $y = \frac{1}{2}x - 1$
$y = 4x + 6$



3. $y = 1$
$y = 2x + 1$



Solve the system of linear equations by substitution. Check your solution. *(Section 5.2)*

4. $y = x - 4$
$-2x + y = 18$

5. $2y + x = -4$
$y - x = -5$

6. $3x - 5y = 13$
$x + 4y = 10$

Solve the system of linear equations by elimination. Check your solution. *(Section 5.3)*

7. $x + y = 4$
$-3x - y = -8$

8. $x + 3y = 1$
$5x + 6y = 14$

9. $2x - 3y = -5$
$5x + 2y = 16$

Solve the system of linear equations. *(Section 5.4)*

10. $x - y = 1$
$x - y = 6$

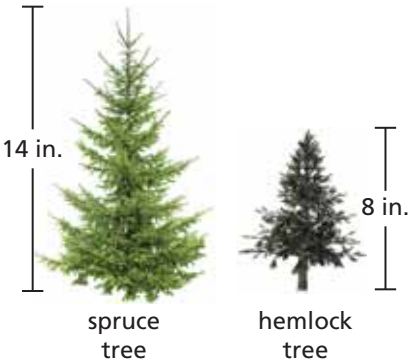
11. $6x + 2y = 16$
$2x - y = 2$

12. $3x - 3y = -2$
$-6x + 6y = 4$

13. You plant a spruce tree that grows 4 inches per year and a hemlock tree that grows 6 inches per year. The initial heights are shown. *(Section 5.1)*

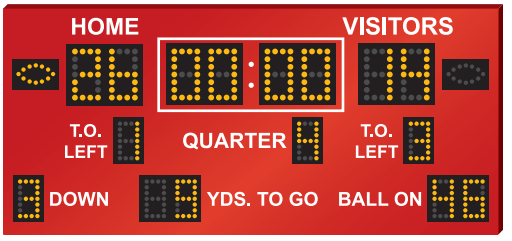
a. Write a system of linear equations that represents this situation.

b. Solve the system by graphing. Interpret your solution.



14. It takes you 3 hours to drive to a concert 135 miles away. You drive 55 miles per hour on highways and 40 miles per hour on the rest of the roads. *(Section 5.1, Section 5.2, and Section 5.3)*

a. How much time do you spend driving at each speed?

b. How many miles do you drive on highways? the rest of the roads?

15. In a football game, all of the home team's points are from 7-point touchdowns and 3-point field goals. The team scores six times. Write and solve a system of linear equations to find the numbers of touchdowns and field goals that the home team scores. *(Section 5.1, Section 5.2, and Section 5.3)*