Solve the system using the substitution method.
1. \[2x + y = 5\]
   \[4x + 3y = 7\]
2. \[4x + 2y = 2\]
   \[x + 3y = 13\]
3. \[x - 3y = 8\]
   \[-2x + 3y = -7\]
4. \[6x - 2y = -4\]
   \[-8x + y = -3\]
5. \[x - 3y = 18\]
   \[-x + 3y = 12\]
6. \[4x - y = -6\]
   \[-\frac{4}{3}x + \frac{1}{3}y = 2\]

Solve the system using the linear combination method.
7. \[2x + 3y = 12\]
   \[3x - 4y = 1\]
8. \[-7x + 2y = -1\]
   \[-8x + 4y = -8\]
9. \[3x + 4y = -6\]
   \[2x - 5y = 19\]
10. \[2x + 5y = 1\]
    \[x + \frac{5}{2}y = \frac{1}{2}\]
11. \[\frac{1}{2}x + 3y = 9\]
    \[\frac{1}{3}x + y = 4\]
12. \[4x - 6y = 4\]
    \[6x + 3y = 2\]

Solve the system using any algebraic method.
13. \[0.25x + 0.5y = 12.5\]
    \[0.3x + 0.5y = 13\]
14. \[0.75x + 0.3y = 4.5\]
    \[0.125x + 0.4y = -1\]
15. \[0.2x + 1.4y = 9.4\]
    \[0.5x - 0.7y = -1.7\]
16. \[0.8x - 2.1y = 10.8\]
    \[1.6x - 0.7y = 7.6\]
17. \[5x - 4y = -4\]
    \[2x + 2y = -\frac{7}{10}\]
18. \[5x + y = \frac{5}{6}\]
    \[3x + 4y = -8\]
19. \[6x - 9y = 1\]
    \[2x + 4y = 5\]
20. \[0.3x - 0.2y = 1.4\]
    \[0.12x - 0.8y = 0.56\]
21. \[4.2x + 2.1y = 10.5\]
    \[1.4x - 1.3y = 2.7\]

22. Labor Force  From 1840 to 1990 the percent of the labor force in farming and non-farming occupations can be modeled by the following equations where \(t\) is the number of years since 1840.
   - \(y = -0.48t + 67.2\)  farming occupations
   - \(y = 0.48t + 32.9\)  nonfarming occupations

   In what year was the labor force split equally into farming and non-farming occupations? Round your answer to the nearest year.

Computers Per Capita  Use the table below of the number of computers per 1000 people in the United Kingdom and Netherlands from 1991 through 1995.

<table>
<thead>
<tr>
<th>Years since 1990, (t)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom, (U)</td>
<td>125.7</td>
<td>144.8</td>
<td>164.8</td>
<td>187.4</td>
<td>216.5</td>
</tr>
<tr>
<td>Netherlands, (N)</td>
<td>109.7</td>
<td>131.1</td>
<td>156.9</td>
<td>184.3</td>
<td>214.8</td>
</tr>
</tbody>
</table>

23. Use a graphing calculator to make scatter plots for the data.

24. For each scatter plot, find an equation of the line of best fit.

25. Find the coordinates of the point of intersection. Describe what this point represents.