Check Up

1. Use technology to solve each of the following systems of linear equations.

   a. $y = 4.5x - 1$ and $y = -3x + 9.5$

   b. $2x + 5y - 9 = 0$ and $9x + 7y + 3 = 0$

☑ Compare your answers.

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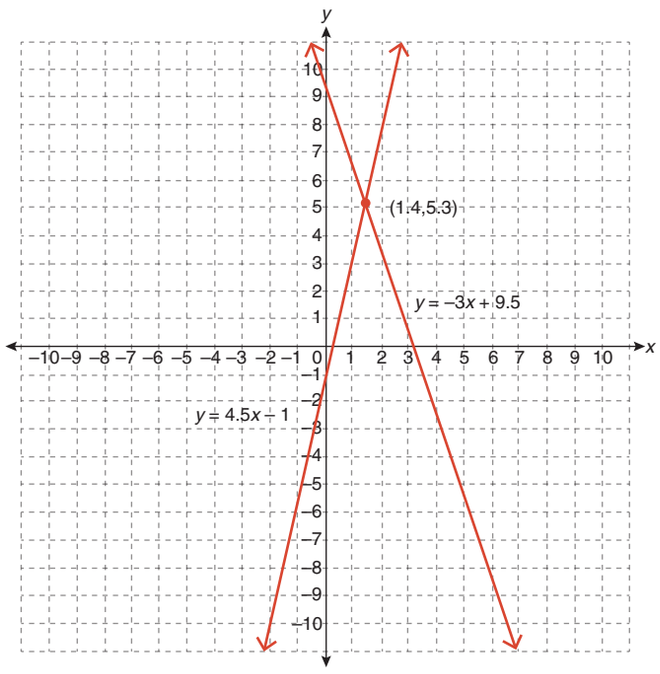
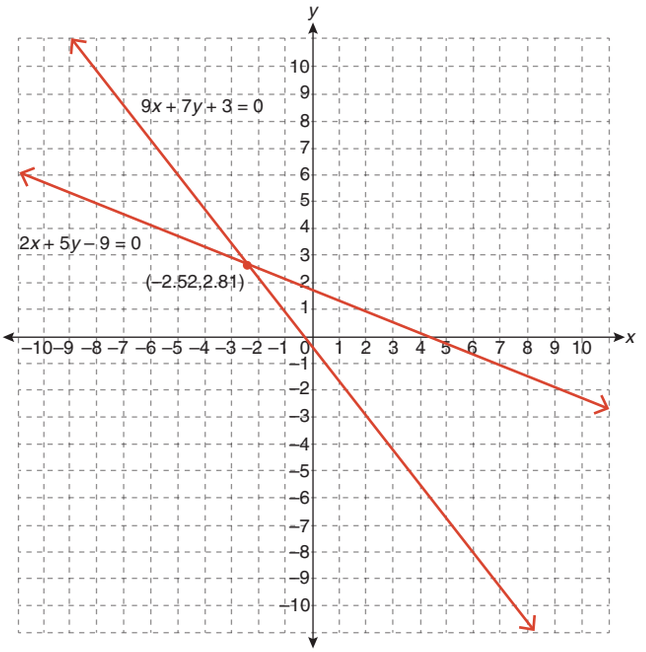


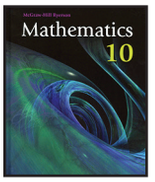
The intersection occurs at the point (1.4,5.3), so this is a solution to the system of equations.

b. $2x + 5y - 9 = 0$ and $9x + 7y + 3 = 0$

Some graphing programs will require you to isolate y before entering the equation.



The intersection point occurs at approximately (–2.52,2.81), so this is an approximate solution.



For further information about graphing linear systems of equations, see pp. 416 – 426 and 446 – 454 of *Mathematics 10*.

Multimedia

Additional video examples involving graphing linear systems have been provided.

A system of linear equations is two or more linear equations that use the same variables. Systems of linear equations can be solved by graphing the corresponding relations, and determining where the lines intersect. This method is very visual. Unfortunately, graphing may take some time and is also limited to determining approximate solution values for many systems. The next lesson explores a method of solving a system of linear equations algebraically (without graphing).