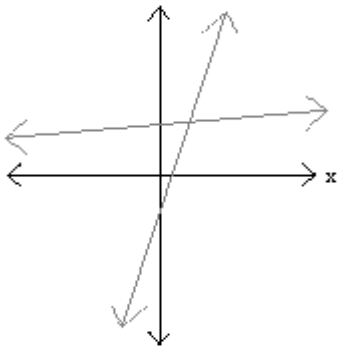
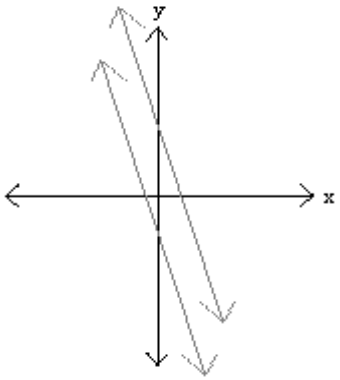
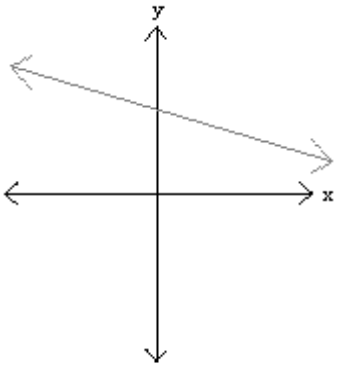
SYSTEMS OF EQUATIONS
Two Equations and Two Unknowns

Solution	1 solution	No solutions	Infinite Number of solutions
Graph			
	Consistent system	Inconsistent system	Consistent system
	Independent equations	Independent equations	Dependent equations
Look For	Only one variable eliminated	Both variables eliminated and resulting statement is true	Both variables eliminated and resulting statement is false

Method I: The Graphing Method

Here are the three steps for solving systems of equations by the graphing method:

1. Graph each equation of the system on the same coordinate axes.
2. Find the intersection(s) of the graphs. If there are no intersection(s), then there is no solution.
3. Check your solution.

This is the least reliable method of the three methods that we will discuss, as sometimes the solution is difficult to obtain from a graph, especially when fractions are involved.

Method II: The Substitution Method

Here are the four steps for solving systems of equations by the substitution method:

1. Solve an equation for one of its variables, if necessary.
2. Substitute the result of step 1 into the other equation(s) and then solve.
3. Solve for the remaining variable(s) using the result from step 2.
4. Check your solution.

Method III: The Addition Method

Here are the four steps for solving systems of equations by the addition method:

1. Write each equation of the system in general form.
2. Eliminate one of the variables. This is the first half of your solution.
3. Solve for the remaining variable(s) using the result from step 2.
4. Check your solution.