Solving a System by Elimination

Name _____

Date _____ Period _____

Three outcomes when solving a system by elimination

$x = 2$ $y = -3$	$5 = 5$ True Statement	$5 \neq 19$ False Statement

Solve the system of equations:

$$2x + 3y = 34$$
$$4x - 3y = -4$$

1. Line the x and y variables on top of each other.
2. Add equations together, eliminating the appropriate variable.
3. Solve for first variable.
4. Insert value into either equation, solve for second variable.

Solve the system of equations:

$$6x + 3y = -15$$
$$-6x = 3y + 25$$

1. Line the x and y variables on top of each other.
2. Add equations together, eliminating the appropriate variable.
3. Solve for first variable.
4. Insert value into either equation, solve for second variable.

Solve the system of equations:

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

1. Line the x and y variables on top of each other.
2. Add equations together, eliminating the appropriate variable.
3. Solve for first variable.
4. Insert value into either equation, solve for second variable.

Solve the system of equations:

1. Line the x and y variables on top of each other.
2. Add equations together, eliminating the appropriate variable.
3. Solve for first variable.
4. Insert value into either equation, solve for second variable.

$$2x + 4y = -10$$
$$3x + 3y = -3$$

Solve the system of equations:

1. Line the x and y variables on top of each other.
2. Add equations together, eliminating the appropriate variable.
3. Solve for first variable.
4. Insert value into either equation, solve for second variable.

$x = 2$ $y = -3$	$5 = 5$ True Statement	$5 \neq 19$ False Statement
(x,y) Solution(s) System is consistent Equations are independent	Infinitely Many Solutions System is consistent Equations are dependent	No Solutions System is inconsistent