

Substitution and Special Cases



Review: a) Predict the number of solutions the system of linear equations will have by looking at the slope and y -intercepts of the equations and using the thinking map you made on Day 5. b) Solve the system of linear equations by using substitution. c) Verify your answer.

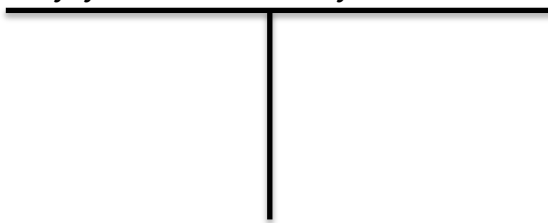
1)
$$\begin{cases} y = -3x + 6 \\ y = 2x + 1 \end{cases}$$

a) There will be _____ solution(s) because _____.

b) $y = -3x + 6$; $y = 2x + 1$

c) Verify your solution by substitution.

$$-3x + 6 = 2x + 1$$



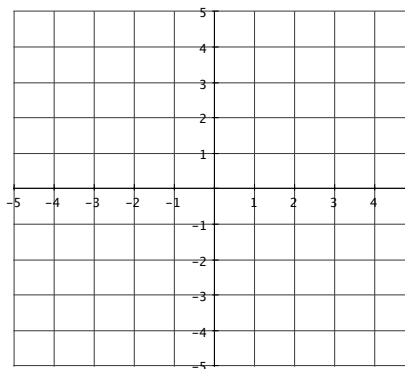
The solution is _____; my prediction was _____.

2)
$$\begin{cases} y = 2x + 4 \\ y = 2x + 1 \end{cases}$$

a) There will be _____ solution(s) because _____.

b) $y = 2x + 4$; $y = 2x + 1$

c) Verify your solution by graphing.



The solution is _____; my prediction was _____.

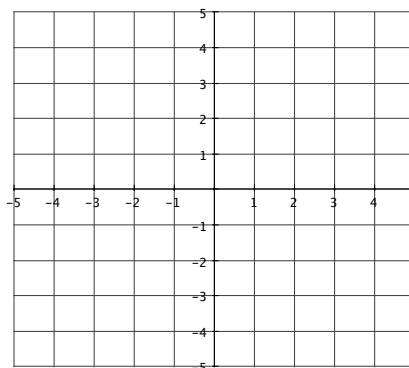
When solving a system of linear equations by the substitution method and the simplified equation is NOT EQUIVALENT (for example, $4 \neq 6$) there is _____ solution.

$$3) \begin{cases} y = -x + 5 \\ 2x + 2y = 10 \end{cases}$$

a) There will be _____ solution(s) because _____.

b) $y = -x + 5$; $2x + 2y = 10$

c) Verify your solution by graphing.



The solution is _____; my prediction was _____.

When solving a system of linear equations by the substitution method and the simplified equation is two equivalent variables, or numbers, (for example $x = x$; $10 = 10$), there are _____ solutions.

Solve problems 4 – 6 by using the substitution method.

4) $\begin{cases} y = x + 3 \\ x + 2y = 6 \end{cases}$

5) $\begin{cases} y = x - 1 \\ -x + y = 2 \end{cases}$

6) $\begin{cases} y = -3x + 1 \\ 3x + y = 1 \end{cases}$