

Solving Linear Systems by Substitution

Show all your work on your own paper.

1. Solve each system by substitution. Check solutions using “left-side / right-side”.

a) $2x + y = 6$
 $3x + 2y = 10$

b) $x - 2y = 4$
 $2x - 3y = 7$

2. Solve each system by substitution. Check your final answers in the answer key.

a) $2x + 3y = 6$
 $x + y = 3$

b) $2x - y = 13$
 $x + 2y = -6$

c) $4x - y = 3$
 $6x - 2y = 5$

d) $2x - 5y = 12$
 $x + 10y = -9$

3. Complete the next three linear systems using either graphing or substitution (or both) for additional practice. Check your final answers in the answer key.

a) $x - 4y = 8$
 $2x - 8y = 8$

b) $2x - y = 2$
 $3x - 2y = 3$

c) $x + y - 4 = 0$
 $2x = 8 - 2y$

Solving Linear Systems by Substitution — Final Answers

Final answers only.

1. a) $(2, 2)$ b) $(2, -1)$
2. a) $(3, 0)$ b) $(4, -5)$ c) $\left(\frac{1}{2}, -1\right)$ d) $\left(3, -\frac{6}{5}\right)$
3. a) no solution b) $(1, 0)$ c) infinitely many solutions