



Algebra 1

Topic: Solving Systems of Linear Equations by Substitution

Instructions

Solve the following systems of linear equations by substitution. Show all your work and check your solution.

Practice Problems

1. Tell which equation you would choose to solve for one of the variables. Explain:

(i) $x + 4y = 30$
 $2x - y = 0$

(iii) $5x + 3y = 11$
 $4x - y = 5$

(ii) $3x - 2y = 10$
 $x + y = 7$

(iv) $2x + 3y = 8$
 $x - y = 1$

2. Solve the system of linear equations by substitution. Check your solution:

(i) $x - 3y = -5$
 $4x + y = -1$

(iii) $5x - 4y = 9$
 $x + 3y = 6$

(ii) $3x + y = 7$
 $x - 2y = 4$

(iv) $2x + y = 5$
 $3x - 2y = 8$

(v) $x + 2y = 12$
 $3x + y = 10$

(vi) $2x + y = 7$
 $4x - y = 8$

Multiple-Choice Questions

1. The solution to the system $x + y = 7$ and $3x - y = 4$ is:
 - a. $(2, 5)$
 - b. $(3, 4)$
 - c. $(1, 6)$
 - d. $(0, 7)$
2. The solution to the system $x + 2y = 6$ and $3x - 4y = 5$ is:
 - a. $(1, 2)$
 - b. $(2, 1)$
 - c. $(3, 0)$
 - d. $(0, 3)$
3. The solution to the system $2x + y = 9$ and $4x - 3y = 7$ is:
 - a. $(1, 7)$
 - b. $(2, 5)$
 - c. $(3, 4)$
 - d. $(0, 9)$

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