

Solving Linear Systems by Elimination

1. State whether addition, subtraction, or neither could be used to solve these systems of equations. Then solve the systems.

a. $a + b = 8$
 $a - 5b = -10$

b. $2x + y = 8$
 $x + 2y = 8$

c. $2x + y = 6$
 $2x - y = -2$

2. Use elimination to solve the systems of equations.

a. $m + n = 6$
 $8m + n = -8$

b. $5s - 10t = 10$
 $-5s + 12t = 4$

c. $0.9x + 0.5y = 1.2$
 $0.5x - 0.5y = 0.8$

d. $\frac{2}{3}y - \frac{4}{3}x = 2$
 $-\frac{1}{3}y + \frac{4}{3}x = 1$

e. $-2c - 8d = 7$
 $-2c + 2d = 2$

f. $7 = 2u - 3v$
 $3v + 8u = -4$

3. The sum of two numbers is 190 and their difference is 34. Find the numbers.

4. The sum of the digits of a two-digit number is 9, and their difference is 5. Find the number.

5. A two-digit number is one more than two times its ones digit. Also, the sum of its digits is 10. Find the number.

6. The tens digit of a two-digit number is one less than thrice its ones digit, and the digit sum is 11. Find the number.