

## Variables on both sides

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Solve. Collect the variable terms on one side first.

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1.  $9n - 4 = 8n - 10$

$n =$  \_\_\_\_\_

2.  $6k + 4 = 9k + 28$

$k =$  \_\_\_\_\_

3.  $6x - 8 = -x + 41$

$x =$  \_\_\_\_\_

4.  $6n = 8n - 14$

$n =$  \_\_\_\_\_

5.  $-5m - 11 = -2m - 41$

$m =$  \_\_\_\_\_

6.  $-8k = -9k - 2$

$k =$  \_\_\_\_\_

7.  $3k + 8 = 4k + 6$

$k =$  \_\_\_\_\_

8.  $5k - 12 = -5k - 2$

$k =$  \_\_\_\_\_

9.  $-5x - 7 = 6x + 37$

$x =$  \_\_\_\_\_

10.  $9m + 3 = 2m + 52$

$m =$  \_\_\_\_\_

11.  $9m + 6 = -2m + 6$

$m =$  \_\_\_\_\_

12.  $-x + 15 = -4x + 15$

$x =$  \_\_\_\_\_

## Distributive property

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Solve. Distribute first, then collect like terms.

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1.  $3(k + 9) = -3k - 15$

$k =$  \_\_\_\_\_

2.  $3(t - 1) + 12 = 6$

$t =$  \_\_\_\_\_

3.  $-4(x - 9) - 2 = 38$

$x =$  \_\_\_\_\_

4.  $-6(x - 8) = x + 34$

$x =$  \_\_\_\_\_

5.  $-2(k + 7) = -9k - 35$

$k =$  \_\_\_\_\_

6.  $-5(x + 8) = 4x + 41$

$x =$  \_\_\_\_\_

7.  $3(y - 1) = y - 15$

$y =$  \_\_\_\_\_

8.  $3(t + 8) = 7t + 52$

$t =$  \_\_\_\_\_

9.  $4(y - 2) - 7 = -19$

$y =$  \_\_\_\_\_

10.  $-2(k + 8) - 2 = -18$

$k =$  \_\_\_\_\_

11.  $3(k - 5) = k - 33$

$k =$  \_\_\_\_\_

12.  $-2(t + 6) = -9t - 82$

$t =$  \_\_\_\_\_

# Combining like terms

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Solve. Combine like terms first.

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1.  $-y - 6 + 5y = 26$

$y =$  \_\_\_\_\_

2.  $k - 4 - 4k = 11$

$k =$  \_\_\_\_\_

3.  $7y + 5 - 2y = -5$

$y =$  \_\_\_\_\_

4.  $n + 6 - 4n = -3$

$n =$  \_\_\_\_\_

5.  $-6t + 4 - 6t = 4$

$t =$  \_\_\_\_\_

6.  $-2y + 10 + 5y = -5$

$y =$  \_\_\_\_\_

7.  $x + 13 - 3x = -3$

$x =$  \_\_\_\_\_

8.  $-m + 10 - 2m = 31$

$m =$  \_\_\_\_\_

9.  $7x - 5 - 3x = 27$

$x =$  \_\_\_\_\_

10.  $2x - 11 + 9x = 22$

$x =$  \_\_\_\_\_

11.  $7y - 1 - y = 5$

$y =$  \_\_\_\_\_

12.  $4t + 3 + 4t = 27$

$t =$  \_\_\_\_\_

## Number of solutions

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Solve. Write the solution, or say if there is no solution or infinitely many solutions.

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1.  $-4(x - 3) = 7x - 43$

Answer: \_\_\_\_\_

2.  $5(k - 2) = 8k - 16$

Answer: \_\_\_\_\_

3.  $-5(n + 9) = -5n - 45$

Answer: \_\_\_\_\_

4.  $6(x - 2) = 7x - 10$

Answer: \_\_\_\_\_

5.  $3(m - 8) = -6m - 51$

Answer: \_\_\_\_\_

6.  $-2(k - 2) = -2k + 5$

Answer: \_\_\_\_\_

7.  $-6(k - 6) = -k + 1$

Answer: \_\_\_\_\_

8.  $-2(x - 2) = 8x + 54$

Answer: \_\_\_\_\_

9.  $-3(n - 1) = -3n + 3$

Answer: \_\_\_\_\_

10.  $-6(n + 6) = -6n - 30$

Answer: \_\_\_\_\_

11.  $-6(m - 1) = 7m - 98$

Answer: \_\_\_\_\_

12.  $-6(m + 6) = -9m - 57$

Answer: \_\_\_\_\_