Lesson 4 Reteach

Solve Two-Step Equations

To solve a two-step equation, undo the addition or subtraction first. Then undo the multiplication or division.

Example 1

Solve $7v - 3 = 25$. Check your solution.

$7v - 3 = 25$	Write the equation.
$\underline{+3 = +3}$	Undo the subtraction by adding 3 to each side.
$7v \quad = 28$	Simplify.
$\dfrac{7v}{7} = \dfrac{28}{7}$	Undo the multiplication by dividing each side by 7.
$v = 4$	Simplify.

Check	$7v - 3 = 25$	Write the original equation.
	$7(4) - 3 \overset{?}{=} 25$	Replace v with 4.
	$28 - 3 \overset{?}{=} 25$	Multiply.
	$25 = 25 \checkmark$	The solution checks.

The solution is 4.

Example 2

Solve $-10 = 8 + 3x$. Check your solution.

$-10 = \quad 8 + 3x$	Write the equation.
$\underline{-8 = -8}$	Undo the addition by subtracting 8 from each side.
$-18 = \quad\quad 3x$	Simplify.
$\dfrac{-18}{3} = \dfrac{3x}{3}$	Undo the multiplication by dividing each side by 3.
$-6 = x$	Simplify.

Check	$-10 = 8 + 3x$	Write the original equation.
	$-10 \overset{?}{=} 8 + 3(-6)$	Replace x with -6.
	$-10 \overset{?}{=} 8 + (-18)$	Multiply.
	$-10 = -10 \checkmark$	The solution checks.

The solution is -6.

Exercises

Solve each equation. Check your solution.

1. $4y + 1 = 13$
3

2. $6x + 2 = 26$
4

3. $-3 = 5k + 7$
−2

4. $\dfrac{2}{3}n + 4 = -26$
−45

5. $7 = -3c - 2$
−3

6. $-8p + 3 = -29$
4

7. $-5 = -5t - 5$
0

8. $-9r + 12 = -24$
4

9. $11 + \dfrac{7}{9}n = 4$
−9

10. $35 = 7 + 4b$
7

11. $-15 + \dfrac{4}{5}p = 9$
30

12. $49 = 16 + 3y$
11

13. $2 = 4t - 14$
4

14. $-9x - 10 = 62$
−8

15. $30 = 12z - 18$
4

16. $7 + 4g = 7$
0

Lesson 4 Skills Practice

Solve Two-Step Equations

Solve each equation. Check your solution.

1. $2x + 1 = 9$

4

2. $5b + 2 = 17$

3

3. $3w + 5 = 23$

6

4. $\frac{3}{8}n + 1 = -25$

$-69\frac{1}{3}$

5. $4t - 2 = 14$

4

6. $7k - 3 = 32$

5

7. $8x - 1 = 63$

8

8. $2x - 5 = 15$

10

9. $2 + \frac{1}{6}a = -4$

-36

10. $9 + 4b = 17$

2

11. $2p + 14 = 0$

-7

12. $3y + \frac{2}{5} = -\frac{1}{5}$

-0.2 or $-\frac{1}{5}$

13. $-\frac{2}{3}w + 5 = 4$

1.5

14. $8x + 7 = -9$

-2

15. $5d - 1 = -11$

-2

16. $4d - 35 = -3$

8

17. $11x - 24 = -2$

2

18. $15a - 54 = -9$

3

19. $3g - 49 = -7$

14

20. $-\frac{1}{2}x - 7 = 18$

-50

21. $-9d - 1 = 17$

-2

22. $-\frac{4}{5}f + 1 = -13$

17.5

23. $-5b + 24 = -1$

5

24. $-6x + 4 = -2$

1