CHECKING FOR UNDERSTANDING

Communicating Mathematics

Read and study the lesson to answer each question.

1. Explain why it was not really necessary to state a subtraction property of equality.

2. In Example 1, if Nolan's goal was 225 pounds, how many more pounds would he need to bench press to reach his goal?

Guided Practice

A

State the number you would subtract from each side of the equation to solve it.

3. $m + 16 = 14$
4. $k + 9 = -16$
5. $t + 5 = 8$
6. $y + 9 = -53$
7. $z + (-3) = -8$
8. $x + (-4) = -37$

Rename each expression by using its inverse operation.

9. $m + (-8)$
10. $y - (-11)$
11. $z + (-31)$
12. $p - (-47)$

Solve and check each equation.

13. $y + 16 = 7$
14. $b + 15 = -32$
15. $x + (-8) = -31$
16. $d - (-27) = 13$

EXERCISES

Practice

B

Solve and check each equation.

17. $18 + m = -57$
18. $y + 3 = -15$
19. $y + 2.3 = 1.5$
20. $2.4 = m + 3.7$
21. $h - 26 = -29$
22. $-15 + d = 13$
23. $16 - y = 37$
24. $41 = 32 - r$
25. $k + (-13) = 21$
26. $z + (-17) = 0$
27. $m - (-13) = 37$
28. $-27 - b = -7$
29. $t - (-16) = 9$
30. $y + (-13) = -27$
31. $-\frac{5}{8} + w = \frac{5}{8}$
32. $x - \left(-\frac{5}{6}\right) = \frac{2}{3}$

Guided Practice

C

State the number by which you would multiply each side to solve each equation.

5. $\frac{b}{3} = -6$
6. $\frac{x}{5} = 10$
7. $\frac{3}{4}n = 30$
8. $-\frac{5}{9}x = 15$
9. $-8n = 24$
10. $1 = \frac{k}{9}$

State the number by which you would divide each side to solve each equation.

11. $4x = 24$
12. $35 = 4y$
13. $-36 = 4z$
14. $-5x = 14$
15. $-8x = -9$
16. $-6x = -36$

EXERCISES

Practice

D

Solve and check each equation.

17. $-4r = -28$
18. $-8t = 56$
19. $5x = -45$
20. $-5s = -85$
21. $9x = 40$
22. $-3y = 52$
23. $3w = -11$
24. $434 = -31y$
25. $42.51x = 8$
26. $5c = 8$
27. $17b = -391$
28. $0.49x = 6.277$
29. $\frac{k}{8} = 6$
30. $11 = \frac{x}{5}$
31. $-10 = \frac{b}{-7}$
32. $\frac{h}{11} = -25$
33. $-65 = \frac{f}{29}$
34. $\frac{c}{-8} = -14$
35. $\frac{2}{5}t = -10$
36. $\frac{4}{9}t = 72$
37. $-\frac{3}{5}y = -50$
38. $-\frac{11}{8}x = 42$
39. $-\frac{13}{5}y = -22$
40. $\frac{5}{2}x = -25$
41. $3x = 4\frac{2}{3}$
42. $-5x = -3\frac{2}{3}$
43. $\left(-4\frac{1}{2}\right)x = 36$

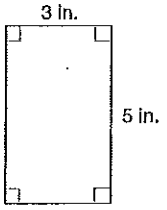
Write an equation and solve.

44. Eight times a number is 216. What is the number?
45. Negative twelve times a number is -156. What is the number?
46. Negative seven times a number is 1.476. What is the number?
47. One fourth of a number is -16.325. What is the number?
48. Four thirds of a number is 4.82. What is the number?

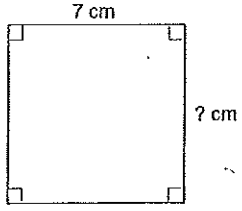
CONNECTION
Geometry

Find the missing measure.

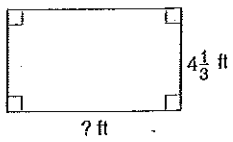
49. $A = ?$ in^2



50. $A = 49$ cm^2



51. $A = 32\frac{1}{2}$ ft^2



EXERCISES

E

Practice Solve.

15. $4t - 7 = 5$
16. $6 = 4n + 2$
17. $4 + 7x = 39$
18. $34 = 8 - 2t$
19. $-3x - 7 = 18$
20. $0.2n + 3 = 8.6$
21. $\frac{3}{4}n - 3 = 9$
22. $7 = 3 - \frac{n}{3}$
23. $7 = \frac{x}{2} + 5$
24. $\frac{y}{3} + 6 = -45$
25. $\frac{c}{-4} - 8 = -42$
26. $\frac{d + 5}{3} = -9$
27. $\frac{3 + n}{7} = -5$
28. $5 = \frac{m - 5}{4}$
29. $16 = \frac{s - 8}{-7}$
30. $\frac{4d + 5}{7} = 7$
31. $\frac{7n + (-1)}{8} = 8$
32. $\frac{-3n - (-4)}{-6} = -9$

F

Solve and check each equation.

15. $3 - 4x = 10x + 10$
16. $17 + 2n = 21 + 2n$
17. $14b - 6 = -2b + 8$
18. $\frac{2}{3}n + 8 = \frac{1}{3}n - 2$
19. $18 + 3.8x = 7.36 - 1.9x$
20. $\frac{3}{4}n + 16 = 2 + \frac{1}{8}n$
21. $6(y + 2) - 4 = -10$
22. $3x - 2(x + 3) = x$
23. $7 + 2(x + 1) = 2x + 9$
24. $6 = 3 + 5(y - 2)$
25. $4(x - 2) = 4x$
26. $5x - 7 = 5(x - 2) + 3$
27. $5 + \frac{1}{2}(b - 6) = 4$
28. $5n + 4 = 7(n + 1) - 2n$
29. $4(2x - 1) = -10(x - 5)$
30. $-8(4 + 9x) = 7(-2 - 11x)$
31. $4(2a - 8) = \frac{1}{7}(49a + 70)$
32. $2(x - 3) + 5 = 3(x - 1)$
33. $-3(2n - 5) = \frac{1}{2}(-12n + 30)$
34. $2[x + 3(x - 1)] = 18$