Practice 3-2

Solving Multi-Step Equations

Solve each equation. Check your answer.

1. $2n + 3n + 7 = -41$

2. $2x - 5x + 6.3 = -14.4$

3. $2z + 9.75 - 7z = -5.15$

4. $3h - 5h + 11 = 17$

5. $2t + 8 - t = -3$

6. $6a - 2a = -36$

7. $3c - 8c + 7 = -18$

8. $7g + 14 - 5g = -8$

9. $2b - 6 + 3b = 14$

10. $2(a - 4) + 15 = 13$

11. $7 + 2(a - 3) = -9$

12. $13 + 2(5c - 2) = 29$

13. $5(3x + 12) = -15$

14. $4(2a + 2) - 17 = 15$

15. $2(m + 1) = 16$

16. $-4x + 3(2x - 5) = 31$

17. $-6 - 3(2k + 4) = 18$

18. $3(t - 12) = 27$

19. $-w + 4(w + 3) = -12$

20. $4 = 0.4(3d - 5)$

21. $-4d + 2(3 + d) = -14$

22. $2x + \frac{3}{4}(4x + 16) = 7$

23. $2(3a + 2) = -8$

24. $5(t - 3) - 2t = -30$

25. $5(b + 4) - 6b = -24$

26. $\frac{2}{5}(5k + 35) - 8 = 12$

27. $0.4(2s + 4) = 4.8$

28. $\frac{2}{3}(9b - 27) = 36$

29. $\frac{1}{2}(12n - 8) = 26$

30. $0.5(2x - 4) = -17$

31. $18 = \frac{c + 5}{2}$

32. $\frac{2}{9}s = -6$

33. $\frac{1}{3}x = \frac{1}{2}$

34. $\frac{2}{3}g + \frac{1}{2}g = 14$

35. $\frac{3x + 7}{2} = 8$

36. $\frac{2x - 6}{4} = -7$

37. $\frac{2}{3}k + \frac{1}{4}k = 22$

38. $-\frac{4}{7}h = -28$

39. $-8 = \frac{4}{5}k$

40. $\frac{3}{4} - \frac{1}{3}z = \frac{1}{4}$

41. $-9 = \frac{3}{4}m$

42. $\frac{5}{6}c - \frac{2}{3}c = \frac{1}{3}$

43. $\frac{4}{5} = -\frac{4}{7}g$

44. $\frac{9x + 6 - 4x}{2} = 8$

45. $-\frac{1}{6}d = -4$

Write an equation to model each situation. Then solve.

46. The attendance at a baseball game was 400 people. Student tickets cost $2 and adult tickets cost $3. Total ticket sales were $1050. How many tickets of each type were sold?

47. The perimeter of a pool table is 30 ft. The table is twice as long as it is wide. What is the length of the pool table?

48. Lopez spent $\frac{1}{3}$ of his vacation money for travel and $\frac{2}{5}$ of his vacation money for lodging. He spent $1100 for travel and lodging. What is the total amount of money he spent on his vacation?

49. Victoria weighs $\frac{5}{7}$ as much as Mario. Victoria weighs 125 lb. How much does Mario weigh?

50. Denise's cell phone plan is $29.95 per month plus $.10 per minute for each minute over 300 minutes of call time. Denise's cell phone bill is $99.95. For how many minutes was she billed?