

Practice 2-3**Solving Multi-Step Equations**

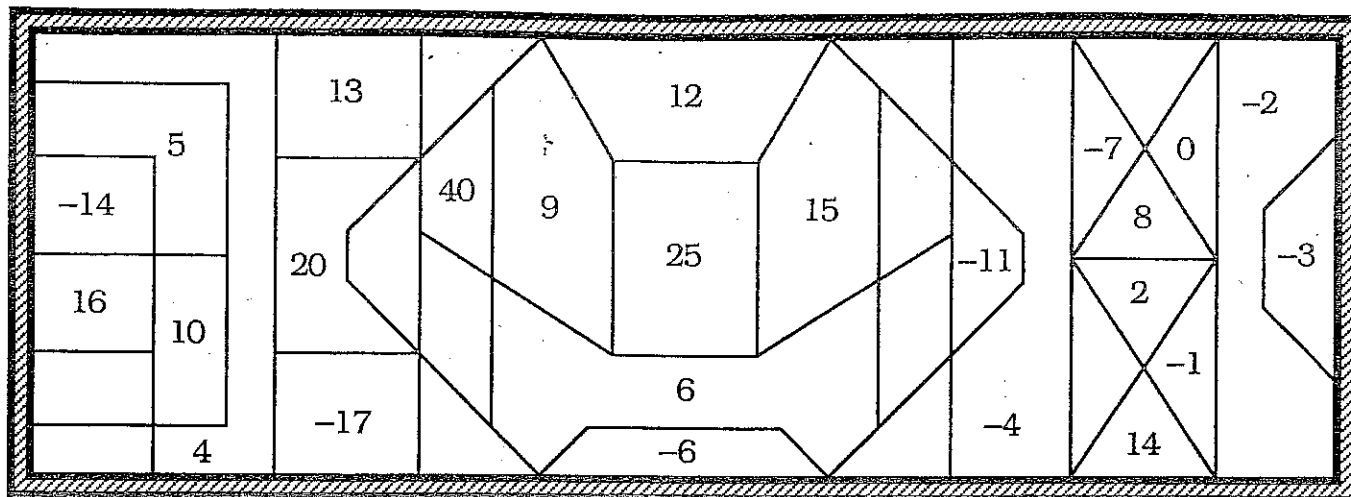
Solve each equation. Check your answer.

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|--|-------------------------------------|---|
| 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?

WHAT IS HEAVY FORWARD BUT NOT BACKWARD?



Shade in the area containing each solution.

1. $x + 3(x + 4) = 20$

2. $6(y - 1) + 8 = 32$

3. $5 + 4(n + 9) = -3$

4. $5(k - 2) - 8k = -34$

5. $2 = 11 + 3(m + 3)$

6. $-2(p - 5) + 7p = -5$

7. $4a - 2(a + 9) = 6$

8. $7 - 4(d - 3) = 23$

9. $8x - 11(x - 2) = -8$

10. $5 = 6(q - 5) - 19$

11. $3(3 - y) + 1 = 31$

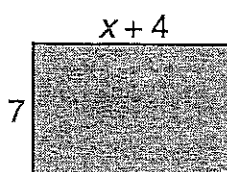
12. $5(2v + 4) = 170$

13. $5(4n - 4) = -60$

14. $2(3t - 8) - 4t = 10$

15. $9 - 4(2p - 1) = 45$

16. Write an equation and solve for x if the area of the rectangle is 70 square units.



17. Write an equation and solve for x if the area of the rectangle is 55 square units.

