

Practice 4-2**Mixed Exercises**Solve each equation. If appropriate, write *identity* or *no solution*.

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|---|----------------------------|---|
| 1. $7 - 2n = n - 14$ | 2. $2(4 - 2r) = -2(r + 5)$ | 3. $3d + 8 = 2d - 7$ |
| 4. $6t = 3(t + 4) - t$ | 5. $8z - 7 = 3z - 7 + 5z$ | 6. $7x - 8 = 3x + 12$ |
| 7. $3(n - 1) = 5n + 3 - 2n$ | 8. $2(6 - 4d) = 25 - 9d$ | 9. $2y + 18 = 5y + 3$ |
| 10. $6h = 54 - 3h$ | 11. $4s - 12 = -5s + 51$ | 12. $8(2f - 3) = 4(4f - 8)$ |
| 13. $6k - 25 = 7 - 2k$ | 14. $3v - 9 = 7 + 2v - v$ | 15. $4(b - 1) = -4 + 4b$ |
| 16. $\frac{1}{4}x + \frac{1}{2} = \frac{1}{4}x - \frac{1}{2}$ | 17. $6 - 4d = 16 - 9d$ | 18. $\frac{2}{3}a - \frac{3}{4} = \frac{3}{4}a$ |
| 19. $2s - 12 + 2s = 4s - 12$ | 20. $3.6y = 5.4 + 3.3y$ | 21. $4.3v - 6 = 8 + 2.3v$ |
| 22. $5(f - 4) = 4(f + 6)$ | 23. $4b - 1 = -4 + 4b + 3$ | 24. $3k - 7 = 8 - 2k$ |

Solve and check.

25. Mari and Brice are picking oranges. Mari has picked 2 boxes of oranges and is picking 5 boxes per hour. Brice has picked 5 boxes of oranges and is picking at 3 boxes per hour. In how many hours will they have picked the same number of boxes?
26. Lois rides her bike to visit a friend. She travels at 10 mi/h. While she's there, it starts to rain. Her friend drives her home in a car traveling at 25 mi/h. It takes Lois 1.5 h longer to go to her friend's than it does to return home. How many hours did it take Lois to ride to her friend's house?
27. Suppose a video store charges non-members \$4 to rent a video. A membership costs \$21 and then videos cost only \$2.50 to rent. How many videos would you need to rent in order to justify a membership?
28. Suppose your club is selling candles to raise money. It costs \$100 to rent a spot to sell the candles. If the candles cost your club \$1 each and are being sold for \$5 each, how many candles must be sold to equal the expenses?

Solve each equation. If appropriate, write *identity* or *no solution*.

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|---|------------------------------------|---|
| 29. $5a + 12 = 6 - 3a$ | 30. $\frac{2}{3}(6x + 3) = 4x + 2$ | 31. $6.5 - 7a = 2a + 2$ |
| 32. $6y + 9 = 3(2y + 3)$ | 33. $4g + 7 = 5g - 1 - g$ | 34. $3x + 2 + x = x - 1$ |
| 35. $2(n + 2) = 5n - 5$ | 36. $6 - 3d = 5(2 - d)$ | 37. $2k + 18 = 5k$ |
| 38. $6.1h = 9.3 - 3.2h$ | 39. $-4.4s - 2 = -5.5s - 4.2$ | 40. $3(2f + 4) = 2(3f - 6)$ |
| 41. $\frac{3}{4}t - \frac{5}{6} = \frac{2}{3}t$ | 42. $3v + 8 = 8 + 2v + v$ | 43. $\frac{1}{2}d - \frac{3}{4} = \frac{3}{5}d$ |
| 44. $3h + 7 = 5h - 1$ | 45. $5(r + 3) = 2r + 6$ | 46. $8 - 3(p - 4) = 2p$ |