

Equations, Proportions, and Percent
Solving Equations, Part I2.1.1 Addition and Subtraction Equations

Solve each equation. Check your answer.

1. $1 = k - 8$

2. $u - 15 = -8$

3. $x - 7 = 10$

4. $-9 = p - 2$

5. $\frac{3}{7} = p - \frac{1}{7}$

6. $q - 0.5 = 1.5$

7. $6 = t - 4.5$

8. $4\frac{2}{3} = r - \frac{1}{3}$

9. $6 = x - 3$

10. $1.75 = k - 0.75$

11. $19 + a = 19$

12. $4 = 3.1 + y$

13. $m + 20 = 3$

14. $-12 = c + 3$

15. $v + 2300 = -800$

16. $b + 42 = 300$

17. $3.5 = n + 4$

18. $b + \frac{1}{2} = \frac{1}{2}$

19. $x + 5.34 = 5.39$

20. $2 = d + \frac{1}{4}$

21. $-12 + f = 3$

22. $-9 = -4 + g$

23. $-1200 + j = 345$

24. $90 = -22 + a$

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25. $26 = -4 + y$

26. $1\frac{3}{4} = -\frac{1}{4} + w$

27. $-\frac{1}{6} + h = \frac{1}{6}$

28. $-5.2 + a = -8$

29. **Finance** Luis deposited \$500 into his bank account. He now has \$4732. Write and solve an equation to find how much was in his account before the deposit. Show that your answer is reasonable.

2.1.2 Multiplication and Division Equations

Solve each equation. Check your answer.

30. $\frac{x}{2} = 12$

31. $-40 = \frac{b}{5}$

32. $-\frac{j}{6} = 6$

33. $-\frac{n}{3} = -4$

34. $-\frac{q}{5} = 30$

35. $1.6 = \frac{d}{3}$

36. $\frac{v}{10} = 5.5$

37. $\frac{h}{8.1} = -4$

38. $5t = -15$

39. $49 = 7c$

40. $-12 = -12u$

41. $-7m = 63$

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42. $-52 = -4c$

43. $11 = -2z$

44. $5f = 1.5$

45. $-8.4 = -4n$

46. $\frac{4}{7}t = -2$

47. $-\frac{4}{5}p = \frac{2}{3}$

48. $\frac{2}{3} = -\frac{1}{3}q$

49. $-\frac{5}{8} = -\frac{3}{4}a$

50. **Finance** After taxes, Alexandra's take-home pay is $\frac{7}{10}$ of her salary before taxes. Write and solve an equation to find Alexandra's salary before taxes for the pay period that resulted in \$392 of take-home pay.

2.1.3 Solving Two-Step Equations

Solve each equation. Check your answer.

51. $5 = 2g + 1$

52. $6h - 7 = 17$

53. $0.6v + 2.1 = 4.5$

54. $3x + 3 = 18$

55. $0.6g + 11 = 5$

56. $32 = 5 - 3t$