

B Apply

Solve each equation. Check your answer.

38. $\frac{2+y}{3} = -1$

39. $-24 = -10t + 3$

40. $10 = 0.3x - 9.1$

41. $\frac{1}{2} = \frac{1}{2}c - 2$

42. $\frac{x-3}{3} = -4\frac{1}{2}$

43. $9.4 = -d + 5.6$

44. $\frac{d+17}{2} = 5\frac{1}{3}$

45. $2.4 + 10m = 6.89$

46. $\frac{1}{5}t - 3 = -17$

Solve each equation. Justify each step.

47. $15 = 9 - 3p$

48. $4 - 5k = -16$

49. $9 + \frac{c}{-5} = -5$

50. $\frac{q}{-3} + 12 = 2$

51. **Error Analysis** Describe and correct the error in finding the solution of the equation at the right.

$$\begin{array}{l} \cancel{2x - 4 = 8} \\ \cancel{2x = 4} \\ \cancel{x = 2} \end{array}$$

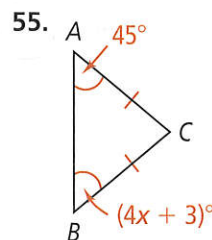
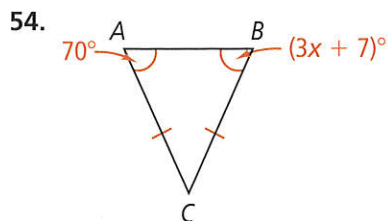
52. **Writing** Without solving the equation $-3x + 5 = 44$, tell whether the value of x is positive or negative. How do you know?

53. a. Solve the equation $2x - 1 = 7$ by undoing subtraction first.

b. Solve the equation in part (a) by undoing multiplication first. Do you get the same answer you got in part (a)?

c. **Reasoning** Which method from parts (a) and (b) do you prefer? Explain.

Geometry In each triangle, the measure of $\angle A$ equals the measure of $\angle B$. Find the value of x .



56. **Think About a Plan** A Web site allows musicians to post their songs online. Then people using the Web site can buy any of the posted songs. Suppose each musician must pay a one-time fee of \$5 to use the Web site. Each musician earns \$.09 every time a particular song of his or hers is downloaded. If a musician earned \$365 for a particular song, how many times was the song downloaded?

- How can the model at the right help you solve the problem?
- How does the model tell you which operations to use in the equation?

-----365-----|

| | |
|-------|----|
| 0.09x | -5 |
|-------|----|

57. **Open-Ended** Write a real-world problem that you can model with the two-step equation $8b + 6 = 38$. Then solve the problem.

58. **Home Improvement** A contractor is adding a back porch on to a house. The porch needs to hold 20 people and furniture that weighs 250 lb. The contractor calculates that the porch needs to hold 3750 lb to meet that specification. What value did the contractor use for the weight of a person?