

**Lesson Check**

1.  $-5$       2.  $63$       3.  $-7$   
4.  $-13$       5.  $\$.62$
6. Subtr. Prop. of Eq. and Mult. Prop. of Eq.; subtr.
7. Add. Prop. of Eq. and Div. Prop. of Eq.; add.
8. Add. Prop. of Eq. and Mult. Prop. of Eq.; add.
9. Subtr. Prop. of Eq. and Div. Prop. of Eq.; subtr.
10. Answers may vary. Sample: No, you must either multiply both sides by 5 first or write the left side as the difference of two fractions and then add  $\frac{3}{5}$  to both sides.

**Practice and Problem-Solving Exercises**

11.  $-12$     12.  $5$       13.  $-1$   
14.  $-50$     15.  $-2$     16.  $72$   
17.  $-27$     18.  $-3$     19.  $126$   
20.  $100$     21.  $-3$     22.  $-5.5$   
23. 16 boxes      24. 3 bottles  
25.  $\$1150$       26.  $24$       27.  $29$   
28.  $8$       29.  $-2$       30.  $12$       31.  $-8$   
32.  $-7$       33.  $8$       34.  $-5$       35.  $6$   
36.  $-6$       37.  $-15$

## Answers

### Practice and Problem-Solving Exercises (continued)

38.  $-5$                       39.  $2.7$   
40.  $63.\overline{6}$                     41.  $5$   
42.  $-10\frac{1}{2}$                     43.  $-3.8$   
44.  $-6\frac{1}{3}$                       45.  $0.449$   
46.  $100$   
47.  $15 - 9 = 9 - 3p - 9$  Subt. Prop. of Eq.  
 $6 = -3p$  Use subtraction to simplify.  
 $\frac{6}{-3} = \frac{-3p}{-3}$  Div. Prop. of Eq.  
 $-2 = p$  Use division to simplify.  
48.  $4 - 5k - 4 = -16 - 4$  Sub. Prop. of Eq.  
 $-5k = -20$  Use subtraction to simplify.  
 $\frac{-5k}{-5} = \frac{-20}{-5}$  Div. Prop. of Eq.  
 $k = 4$  Use division to simplify.

49.  $9 + \frac{c}{-5} - 9 = -5 - 9$  Sub. Prop. of Eq.  
 $\frac{c}{-5} = -14$  Use subtraction to simplify.  
 $\frac{c}{-5} \cdot -5 = -14 \cdot -5$  Mult. Prop.  
of Eq.  
 $c = 70$  Use multiplication to simplify.  
50.  $\frac{q}{-3} + 12 - 12 = 2 - 12$  Sub. Prop.  
of Eq.  
 $\frac{q}{-3} = -10$  Use subtraction to simplify.  
 $\frac{q}{-3} \cdot -3 = -10 \cdot -3$  Mult. Prop.  
of Eq.  
 $q = 30$  Use multiplication to simplify.  
51.  $4$  should be added to each side;  
 $2x - 4 + 4 = 8 + 4$ , so  $2x = 12$  and  
 $x = 6$ .

equation 80  
58. **Home Improvement** A contractor is adding a porch to a house. The porch needs to hold 20 people and furniture that weighs 250 lb. The contractor needs to hold 3750 lb to meet that specification. What value did the contractor use for the weight of a person?

52. Negative;  $x$  must be negative in order for  $-3x + 5$  to equal 44.  
53. a.  $4$   
b. yes  
c. Answers may vary. Sample: The method in part (a) is easier because it doesn't involve fractions.  
54.  $21$   
55.  $10.5$   
56. 4112 times  
57. Check students' work; 4.  
58. 175 lb