Show all work on a separate sheet of paper for full credit.

Practice 1-8

Properties of Real Numbers

Name the property that each equation illustrates.

2. $8 + x = x + 8$

3. $1 \cdot 4y = 4y$

4. $15x + 15y = 15(x + y)$

5. $(8 \cdot 7) \cdot 6 = 8 \cdot (7 \cdot 6)$

6. $\frac{2}{3}\left(\frac{3}{2}\right) = 1$

10. $x + (-x) = 0$

13. $16 + 0 = 16$

19. $wr = rw$

20. $20(a + b) = 20(b + a)$

Practice 2-1

Solving One-Step Equations

Solve each equation. Check your answer.

1. $g - 6 = 2$

2. $15 + b = 4$

3 $8 = h + 24$

4. $63 = 7x$

7. $\frac{c}{14} = -3$

8. $\frac{x}{2} = 13$

20. $a - \frac{1}{3} = \frac{2}{3}$

33. $x + \frac{1}{3} = \frac{5}{6}$

34. $-\frac{s}{3} = 7$

Write an equation to model each situation. Then solve.

22. A stack of 12 bricks is 27 in. high. What is the height of each brick?

23. The sum of Juanita's age and Sara's age is 33 yr. If Sara is 15 years old, how old is Juanita?

Practice 2-2

Solving Two-Step Equations

1. $5a + 2 = 7$

6. $-t + 2 = 12$

13. $67 = -3y + 16$

15. $\frac{m}{9} + 7 = 3$

26. $22 = 7 - 3a$

27. $\frac{k}{3} - 19 = -26$

Practice 2-3

Solve each equation. Check your answer.

1. $2n + 3n + 7 = -41$

5. $2t + 8 - t = -3$

9. $2b - 6 + 3b = 14$

13. $5(3x + 12) = -15$

14. $4(2a + 2) - 17 = 15$

17. $-6 - 3(2k + 4) = 18$

31. $18 = \dfrac{c + 5}{2}$

33. $\frac{1}{3}x = \frac{1}{2}$

34. $\frac{2}{3}g + \frac{1}{2}g = 14$

Practice 2-4

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

1. $7 - 2n = n - 14$

2. $2(4 - 2r) = -2(r + 5)$

5. $8z - 7 = 3z - 7 + 5z$

6. $7x - 8 = 3x + 12$

10. $8(2f - 3) = 4(4f - 8)$

12. $3v - 9 = 7 + 2v - v$

Write an equation to model each situation. Then solve. Check your answer.

34. Hans needs to rent a moving truck. Suppose Company A charges a rate of $40 per day and Company B charges a $60 fee plus $20 per day. For what number of days is the cost the same?

35. Suppose a video store charges nonmembers $4 to rent each video. A store membership costs $21 and members pay only $2.50 to rent each video. For what number of videos is the cost the same?

Practice 2-6

Solve each formula in terms of the given variable.

1. $ad = f;\ a$

2. $n + 3 = q;\ n$

3. $2(j + k) = m;\ k$

4. $2s + t = r;\ t$

5. $m + 2n = p;\ n$

6. $\dfrac{2}{w} = \dfrac{x}{5};\ w$

7. $5a - b = 7;\ a$

8. $h = \dfrac{p}{n};\ p$