LESSON 19-1

Practice and Problem Solving: A/B

1. 180°

2. $\overrightarrow{QR}$

3. 130°

4. 40°

5. 35

6. 100

7. 50°

8. 130°

9. m∠*DEF* = 29°; m∠*FEG* = 61°

10. m∠*DEF* = 91°; m∠*FEG* = 89°

11. Possible answers: ∠1 and ∠3
    or ∠2
    and ∠4

12. Possible answers: ∠1 and ∠2;
    ∠2 and ∠3; ∠3 and ∠4; or ∠1
    and ∠4

13. right

14. 45°; 45°

LESSON 19-2

Practice and Problem Solving: A/B

1. 47°

2. 119°

3. 97°

4. 62°

5. a. m∠2 + m∠3 = 180°

   b. Corr. ∠s Thm.

   c. m∠1 = m∠2

   d. m∠1 + m∠3 = 180°

   e. Substitution Prop. Of
      Equality

6. *x* = 50; *y* = 25

LESSON 19-3

Practice and Problem Solving: A/B

1. *m*‖*n* Conv. of Alt Int. ∠s Thm.

2. *m*‖*n* Conv. of Corr. ∠s Thm.

3. *m* and *n* are parallel if and only if
   m∠7 = 90°.

4. *m*‖*n* Conv. of Same-Side Int. ∠s Thm.

5. *m* and *n* are not parallel.

6. *m*‖*n* Conv. of Corr. ∠s Thm.

7. *m*‖*n* Conv. of Alt Ext. ∠s Thm.

8. *m* and *n* are not parallel.

9. Possible answer: The given information
   states that ∠1 and ∠3 are
   supplementary. ∠1 and ∠2 are also
   supplementary by the Linear Pair
   Theorem. Therefore ∠3 and ∠2 must
   be congruent by the Congruent
   Supplements Theorem. Since ∠3 and
   ∠2 are congruent, $\overline{HI}$ and $\overline{JK}$ are
   parallel by the Converse of the
   Corresponding Angles Theorem.

LESSON 19-4

Practice and Problem Solving: A/B

1. $GH = 16$; $CH = 12$

2. $CR = 17$; $PQ = 15$

3. a. $m \perp n$

   b. $m\angle 1 = 90°$; $m\angle 2 = 90°$

   c. Def. of $\cong \angle s$

   d. $\angle 1$ and $\angle 2$ are a linear pair.

4. All of the borders are straight lines, and the Colorado-Utah border is a transversal to the Colorado-Wyoming and the Colorado-New Mexico borders. Because the transversal is perpendicular to both borders, the borders must be parallel.

LESSON 19-5

Practice and Problem Solving: A/B

1. rise $= 4$, run $= 5$, slope $= \dfrac{4}{5}$

2. rise $= -6$, run $= 3$, slope $= -2$

3. rise $= 3$, run $= 4$, slope $= \dfrac{3}{4}$

4. $y = 9x - 11$ $\qquad$ $y - 7 = 9(x - 2)$

5. $y = 4x - 27$ $\qquad$ $y + 3 = 4(x - 6)$

6. $y = \dfrac{2}{3}x + 8$ $\qquad$ $y - 6 = \frac{2}{3}(x + 3)$

7. $y = -\dfrac{1}{4}x + 13$ $\qquad$ $y - 10 = -\frac{1}{4}(x - 12)$

8. $y = -4x + 17$ $\qquad$ $y - 1 = -4(x - 4)$

9. $y = 3x + 14$ $\qquad$ $y - 8 = 3(x + 2)$

10. $y = \frac{1}{6}x + 9$ $\qquad$ $y - 10 = \frac{1}{6}(x - 6)$

11. $y = -\dfrac{1}{5}x - 2$ $\qquad$ $y + 3 = -\frac{1}{5}(x - 5)$