Name _____ Date _____

LESSON 9.1

# Practice B

*For use with pages 614–619*

**Find the distance between the two points. Then find the midpoint of the line segment joining the two points.**

**1.** (5, 2), (4, 3)

**2.** (−2, 2), (4, 6)

**3.** (−3, 5), (2, 0)

**4.** (7, 1), (2, 7)

**5.** (5, 5), (−5, 1)

**6.** (9, 3), (1, 1)

**7.** (−7, −8), (2, −4)

**8.** (2.4, 1.2), (1.2, 4.6)

**9.** (0, 6.4), (2.7, 0.8)

**10.** (−3.9, 2.1), (2.7, −2.2)

**11.** $\left(\frac{1}{2}, 3\right), \left(\frac{7}{2}, 1\right)$

**12.** $\left(\frac{2}{3}, -\frac{3}{2}\right), \left(4, \frac{3}{2}\right)$

**The vertices of a triangle are given. Classify the triangle as *scalene*, *isosceles*, or *equilateral*.**

**13.** (2, 7), (4, 4), (−1, −1)

**14.** (−2, 5), (−1, −4), (7, 4)

**15.** (1, 6), (2, 5), (2, 7)

**Write an equation for the perpendicular bisector of the line segment joining the two points.**

**16.** (3, 5), (1, 7)

**17.** (7, 5), (1, 2)

**18.** (2, 4), (−3, −6)

**19.** (−2, 1), (−4, −5)

**20.** (8, −4), (6, 4)

**21.** (−1, 3), (4, 1)

**Use the given distance *d* between the two points to find the value of *x* or *y*.**

**22.** (3, 6), (7, *y*); $d = 4\sqrt{2}$

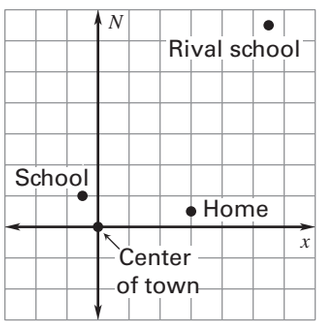
**23.** (*x*, −4), (3, 2); $d = 2\sqrt{10}$

**24.** (−2, −7), (*x*, −12); $d = \sqrt{89}$

**25.** (1, *y*), (−1, 3); $d = 2\sqrt{10}$

**In Exercises 26–31, use the following information.**

**Rival School** The center of your hometown is at the origin of the coordinate plane shown. The location of your home, high school, and rival school are also displayed on the coordinate plane. Each unit on the coordinate plane represents two miles. Round your answers to two decimal places.




**26.** Determine the coordinates of your home.

**27.** Determine the coordinates of your high school.

**28.** Determine the coordinates of your rival school.

**29.** Approximate the distance from home to the high school.

**30.** Approximate the distance from your high school to the rival school.

**31.** On Friday night, you decide to attend the football game because your school is playing the rival school. It's an away game so you have to drive to the game from home. How long (in minutes) will it take to drive to the rival school if you average 35 miles per hour?