NAME _____ DATE _____

Practice C

For use with pages 745–750

Find the distance between the two points. Round the result to the nearest hundredth if necessary.

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

4. $(5, -2), (-1, 1)$ **5.** $(1, -7), (-2, 2)$ **6.** $(-4, 6), (1, -4)$

7. $(6, 9), (-3, 1)$ **8.** $(-7, -10), (-3, -6)$ **9.** $(-2.8, 7), (1.6, 2)$

10. $(-4.7, -5), (1.8, -2.6)$ **11.** $\left(\frac{1}{2}, \frac{1}{4}\right), \left(-\frac{1}{2}, \frac{5}{4}\right)$ **12.** $\left(\frac{2}{5}, \frac{1}{2}\right), \left(-\frac{3}{5}, -\frac{1}{2}\right)$

Use the distance formula to decide whether the three points are vertices of a right triangle.

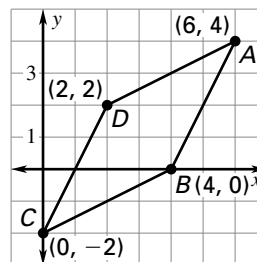**13.** $(4, 0), (2, 1), (-1, -5)$ **14.** $(4, 5), (1, 0), (-1, 2)$ **15.** $(1, -3), (3, 2), (-2, 4)$

16. $(-1, -1), (10, 7), (2, 18)$ **17.** $(2, 1), (4, 0), (5, 7)$ **18.** $(-7, -9), (3, -6), (-1, 7)$

Find the midpoint between the two points.

19. $(-4, 4), (2, 0)$ **20.** $(7, 0), (0, -10)$ **21.** $(-4, -8), (14, 6)$

22. $(10, -3), (6, -5)$ **23.** $(0, -5), (-6, -8)$ **24.** $(3.4, 6), (-2, 4)$

25. $(-2.8, 3), (-1, 3)$ **26.** $(4, 5.6), (-4, -1.8)$ **27.** $(-7, 2), (-5, -8)$

28. $\left(3\frac{1}{2}, -2\right), \left(-\frac{3}{4}, 6\right)$ **29.** $\left(-2\frac{3}{4}, \frac{1}{2}\right), \left(1\frac{1}{4}, 3\frac{1}{2}\right)$ **30.** $\left(\frac{4}{5}, -5\right), (4, -7)$

Geometry **In Exercises 31–35, use the diagram at the right.**

31. Find the length of each side of the parallelogram.

32. Find the midpoint of each side of the parallelogram.

33. Join the midpoints to form a new quadrilateral. Find the lengths of each of its sides.

34. Find the perimeters of the two quadrilaterals.

35. Find the midpoint of each diagonal of the original parallelogram. What can you conclude?

Trapezoids **In Exercises 36–38, use the following information.**

A trapezoid is isosceles if its two opposite nonparallel sides have the same length.

36. Sketch the polygon whose vertices are $(1, 1), (5, 9), (2, 8),$ and $(0, 4)$.

37. Show that it is a trapezoid by showing that two of the sides are parallel.

38. Use the distance formula to show that the trapezoid is isosceles.