Name _____ Date _____

Quadrilaterals – Part 2
Quadrilaterals in Coordinate Geometry – Part 2
Independent Practice

1. A square has the vertices at $(-2, 6), (6, 1), (1, -7)$, and $(-7, -2)$. At what point do the diagonals of the square intersect?

2. A rhombus, $COAL$ is centered at the origin. The longer diagonal is on the y-axis and has a length of $27m$. The shorter diagonal is on the x-axis and has a length of has diagonals with length $19m$. Determine the coordinates of the vertices.

3. Determine the most precise name of the quadrilateral with the vertices at $H(b, 2c)$, $O(4b, 3c), M(5b, c)$, and $E(2b, 0)$.

4. Explain how each scenario can be proven using coordinate geometry.

Part A: The diagonals of a rhombus are each other's bisectors.

Part B: A parallelogram is formed when the midpoints of the sides of an isosceles trapezoid are connected.

5. Determine which of the following formula(s) are needed to prove that a quadrilateral is an isosceles trapezoid. Select all that apply.

   Midpoint Formula

   Slope Formula

   Distance Formula

   The Area Formula

   The Perimeter Formula