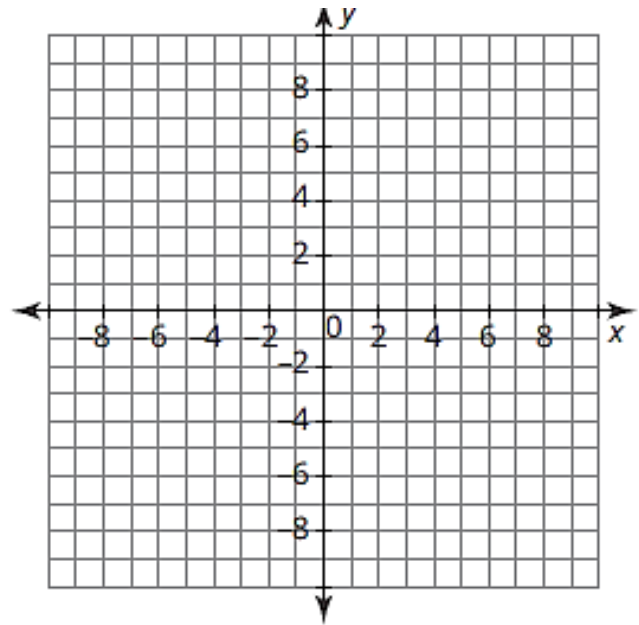# Intro to Coordinate Proofs Exploratory Activity

1. Plot the following coordinate points: A(-4, -2), B(2, 4), C(8, -2), and D(2, -8). Use your graph to answer the following questions:

1. Your graph should have created a square. How would you prove that all the sides are congruent? Prove all the sides are congruent below:
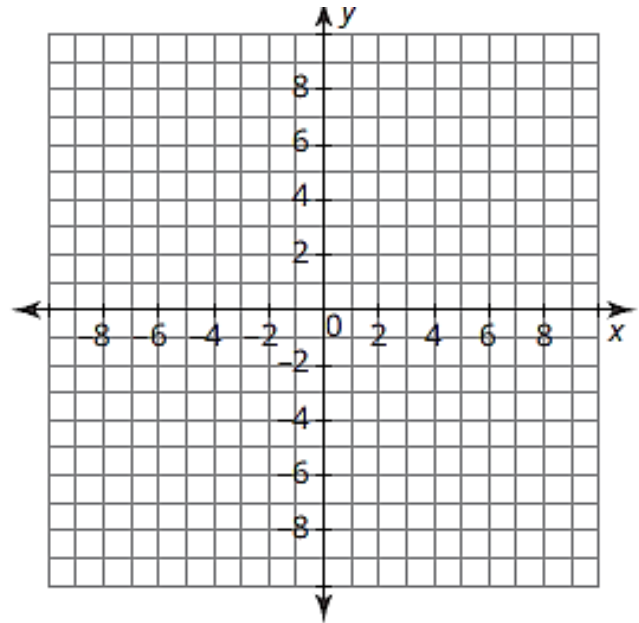

2. How would you prove there are 4 right angles? Prove all the angles are 90 degrees below:

3. What is the area and perimeter of the square?

2. Plot the following coordinate points: A(2, 6), B(8, -3) and C(2, -7). Use your graph to answer the following questions:

1. Your graph should have created a right triangle. How would you prove that the triangle is a right triangle?

2. What is the area and perimeter of the triangle?

3. Plot the following coordinate points: A(-7, -7), B(-4, -1), C(5, -3), and D(4, -5). Use your graph to answer the following questions:

1. Your graph should have created a trapezoid. How will you prove that the figure is a trapezoid?