Geometry   Name _____
Proving Parallelograms and Rectangles Practice
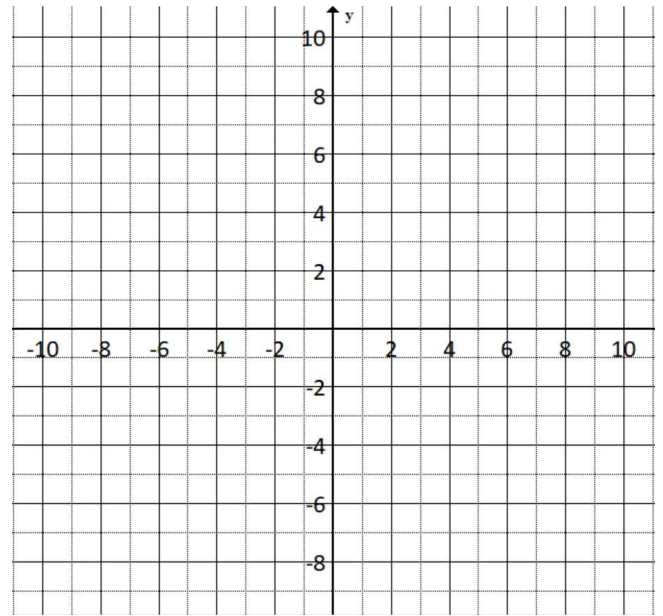
1. Plot points E(1, 2), F(2, 5), G(4, 3) and H(5, 6).

    a. Find the length of all four sides.

    b. Find the slope of all four sides.
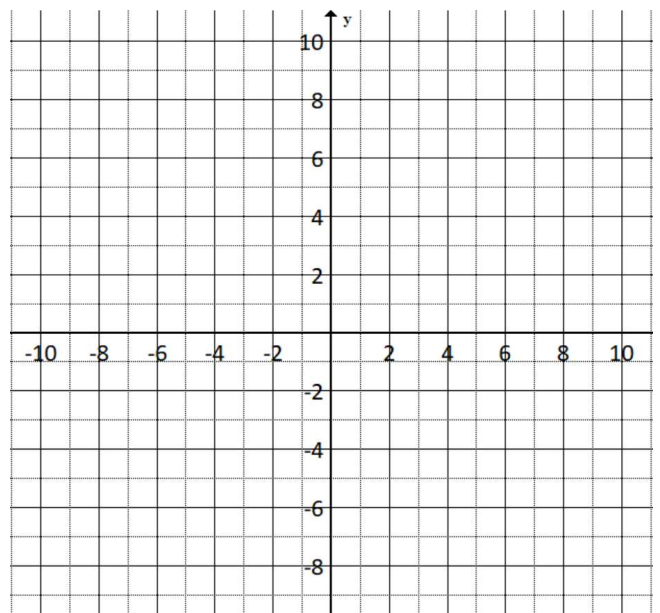
    c. What specialized geometric figure is quadrilateral EFHG? How do you know?

    d. Describe another way that we could have shown that this figure was a rhombus?

2. Plot the points P(5, 2), Q(1, 9), R(-3, 2), and S(1, -5).

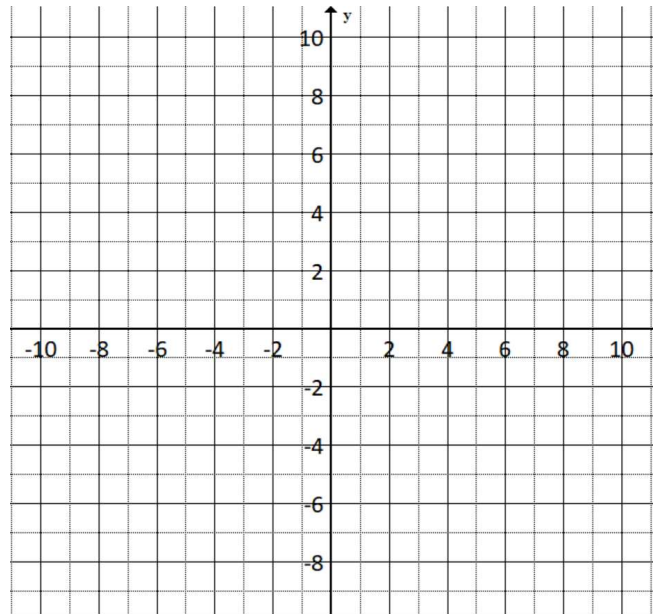   **a.** What properties do you need to prove PQRS is a rhombus?

    b. Show that PQRS is a rhombus.

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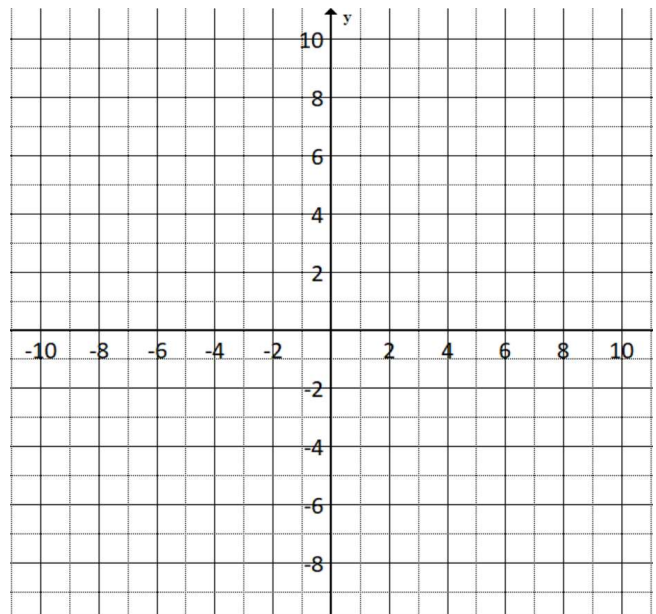**3.** Plot the points P(5, 2), Q(2, 5), R(-1, 2), and S(2, -1).

a. What properties do you need to prove to show PQRS is a square?

b. Show that PQRS is a square.

Determine whether the given points represent the vertices of a parallelogram, rectangle, rhombus, or square. Justify your answer mathematically.

4. J(-5, 6), K(-4, -2), L(4, -1), M(3, 7)

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5.   P(5, 1), Q(9, 6), R(5, 11), S(1, 6)