Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_ Quadrilaterals on a coordinate plane

**1 – 2: Show that the quadrilateral with the given vertices is a parallelogram.**

1. *A*(–3, 2), *B*(–2, 7), *C*(2, 4), and *D*(1, –1) 2. *J*(–1, 0), *K*(–3, 7), *L*(2, 6), and *M*(4, –1)

3. The vertices of square *PQRS* are

*P*(–4, 0), *Q*(4, 3), *R*(7, –5), and *S*(–1, –8).

**Show** that the diagonals of square *PQRS* are

 congruent perpendicular bisectors of each other by

using slope and distance formula. Show your work.

**4 – 5: Use the diagonals to determine whether a parallelogram with the given vertices is a rectangle, rhombus, or square. Give all names that apply.**

4. *A*(–10, 4), *B*(–2, 10), *C*(4, 2), and *D*(–4, –4) 5. *J*(–9, –7), *K*(–4, –2), *L*(3, –3), and *M*(–2, –8)

**6 – 8: Give the best name for a quadrilateral with the given vertices.**

6. (–4, –1), (–4, 6), (2, 6), (2, –4) 7.. (–4, –3), (0, 3), (4, 3), (8, –3)

9. Which of the following is the **best** name for figure *WXYZ* with vertices

*W*(–3, 1), *X*(1, 5),*Y*(8, –2), and *Z*(4, –6)?

(a) Parallelogram

(b) Rectangle

(c) Rhombus

 (d) Square

8. (–8, –4), (–5, 1), (1, –5), and (–2, –10)