Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Coordinate Proofs

Find the coordinates of the intersection of the diagonals of the parallelogram with the given vertices.

 1.  2. 



Three vertices of  are given. Find the coordinate of the remaining vertex.

 3.  4. 



5.  6. 



Graph the quadrilateral with the given vertices in a coordinate plane. Then show that the quadrilateral is a parallelogram by using the assigned properties and theorems.

Slope:  Length:  Midpoint: 

7.  8. 

Definition of a parallelogram Converse of both pairs of opposite sides congruent

 Slope of  \_\_\_\_\_\_\_\_\_ Length of  \_\_\_\_\_\_\_\_\_

 Slope of  \_\_\_\_\_\_\_\_\_ Length of  \_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Length of  \_\_\_\_\_\_\_\_

 Slope of  \_\_\_\_\_\_\_\_\_ Length of  \_\_\_\_\_\_\_\_

9.  10. 

 Converse of one pair of opposite sides both Converse of diagonals bisect each other

 Parallel and congruent Midpoint of  \_\_\_\_\_\_\_\_\_\_

 Slope of  \_\_\_\_\_\_\_\_\_ Midpoint of  \_\_\_\_\_\_\_\_\_\_

 Slope of  \_\_\_\_\_\_\_\_\_

 Length of  \_\_\_\_\_\_\_\_\_

 Length of  \_\_\_\_\_\_\_\_

Decide whether  is a rectangle, a rhombus, or a square. Justify your answers.

11.  12. 



Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Type of Parallelogram: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Type of Parallelogram: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Justification: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Justification: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13.  14. 



Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_\_

Slope of  \_\_\_\_\_\_\_\_\_ Slope of  \_\_\_\_\_\_\_\_\_

Type of Parallelogram: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Type of Parallelogram: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Justification: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Justification: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_