Name:

Date:

School:

Facilitator:

5.05 Explore

**Complete the activity below using** [**Kite & Rhombus Exploration**](http://www.geogebratube.org/student/m3502)**.**

**Explore the other check boxes to see the other properties of a rhombus by using each of the Check Boxes in the upper-right corner of the applet. You should notice that:**

1) Every side is congruent

2) The diagonals are perpendicular

3) Both The diagonals bisect their angles

4) Both diagonals bisect each other

5) Each pair of opposite angles are congruent

**Now transform the shape into a kite by moving the right-most vertex to the right. Again, click the check boxes to explore the properties of this shape.**

1. Is every side still congruent?

2. Are the diagonals still perpendicular?

3. Do the diagonals still bisect their angles?

4. Do the diagonals still bisect each other?

5. Are both pairs of opposite angles still congruent?

**You should notice that only one of the properties of a Rhombus is also a property of a Kite.**

**For all of the other properties, they are changed slightly. Use the sentence starters below to help you describe how these properties have changed**

6. "In a Rhombus, all the sides are congruent - but in a Kite      "

(Hint: this answer might include the word *consecutive*)

7. "In a Rhombus, both diagonals bisect each other - but in a Kite      "
Hint: this answer might include the word *only*)

8. "In a Rhombus, both diagonals bisect their angles - but in a Kite      "
(Hint: this answer might include the word *only*)

9. "In a Rhombus, both pairs of opposite angles are congruent - but in a Kite      "

(Hint: this answer might include the word *only*)