## Application: Quadrilaterals Within Quadrilaterals

Step 1. Below are two non-descript quadrilaterals. One has the midpoints placed on the sides. Connect those midpoints with you pencil and straightedge. Notice you have drawn another quadrilateral, a special one! What is it called?


Step 2. Now measure and connect the midpoints on the second quadrilateral. What type of quadrilateral was made this time?

Step 3. Write a sentence/prediction describing the situation above. Do you think this holds true for ANY quadrilateral.

Step 4. In the space below, measure and denote the midpoints on the quadrilaterals listed in the first column and their midpoints. What special shapes are formed when you connect the midpoints? Some you can predict while others may surprise you!

| Quadrilaterals Within Quadrilaterals |  |
| :--- | :---: |
| Original Polygon | Most specific name for the <br> quadrilateral formed by <br> connecting the midpoints |
| Quadrilateral | Parallogram |
| Parallelogram |  |
| Rectangle |  |
| Square |  |
| Rhombus |  |
| Trapezoid |  |
| Isosceles Trapezoid |  |



