**Reviewing ring conformation with an origami exercise**

**Materials**

8.5 x 11 paper

ruler (optional)

scissors

pencil, colored markers or dot labels

toothpicks (optional)

**Instructions**

1. Grab a sheet of paper.
2. Trim it by cutting as indicated in each diagram.
3. Fold it as indicated in each diagram.
4. To explore naming and / or cis-trans conformations, use pencil, marker, dots or tootpicks to place substituents at each of the six points of the ring.
   1. Note that substituents can be located either above or below the plane of the ring (on the top or the bottom of the paper).
   2. Alternatively, you can stick a toothpick through each point of ring and mark each end of the toothpick with a different color to look at cis-trans conformations.

**3-atom rings**



**4-atom rings**



**5-atom rings**

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**6-atom rings: chairs & boats**

1. Grab an 8.5 x 11-inch sheet of paper.
2. Fold the long end over to create a square (or cut it off to leave a square).
3. Fold two opposite diagonal corners in to create a hexagon. (Alternately, cut those opposite diagonal corners off.)
4. To create a boat, fold two opposite points up.
5. To create a chair, fold two opposite points up
6. You can use pencil to place substituents at each of the six points of the ring, and the substituents can be located either above or below the plane of the ring (on the top or the bottom of the paper).
7. Alternatively, you can stick a toothpick through each point of ring and mark each end of the toothpick with a different color to look at cis-trans conformations.

