NAME _____ DATE _____

# *Activity Lesson Opener*

**For use with pages 488–496**

**SET UP:** Work in a group.
**YOU WILL NEED:** • scissors   • construction paper
              • ruler   • protractor

**1.** Each member of the group should draw two large triangles of any type on a sheet of construction paper and cut them out. Put all the triangles for your group in a pile.

**In Exercises 2–4, you will be creating similar triangles.**
**Do not use a protractor or ruler to create the triangles.**

**2.** Choose a triangle from the pile and create a similar triangle as follows: locate the midpoints of two sides of the triangle by paper folding. Place the triangle on a new sheet of paper and trace the angle included by the midpoints. Trace the sides up to the midpoints. Remove the triangle and draw a segment for the third side of a new triangle. Cut out the triangle. Two pairs of corresponding sides are proportional, with the included angles congruent, so the two triangles are similar by the Side-Angle-Side (SAS) Similarity Theorem. Use a protractor and a ruler to verify similarity.
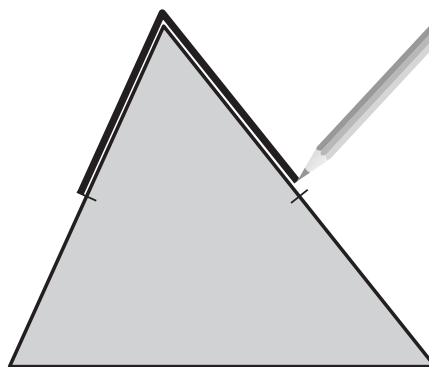
**3.** Choose another triangle from the pile and create a similar triangle as follows: first create a congruent triangle by tracing and cutting. Then cut a narrow strip of the same width off each side of the new triangle, parallel to the side. Corresponding sides are proportional, so the two triangles are similar by the Side-Side-Side (SSS) Similarity Theorem. Use a protractor and a ruler to verify similarity.

**4.** Choose another triangle from the pile and create a similar triangle by using the AA Similarity Postulate. As a group, create some triangles that are larger and some that are smaller. Share your methods as you work. Use a protractor and a ruler to verify similarity.