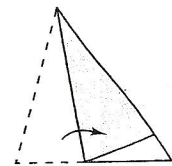


In Activity 1, you will use paper folding to investigate the bisectors of the angles of a triangle.

Activity 1

- Step 1** Draw and cut out three different triangles: one acute, one right, and one obtuse.
- Step 2** Use paper folding to make the angle bisectors of each angle of your acute triangle. What do you notice about the angle bisectors?
- Step 3** Repeat Step 2 with your right triangle and your obtuse triangle. Does your discovery from Step 2 still hold true?

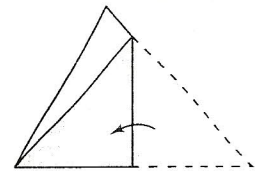


Folding an angle bisector

In Activity 2, you will use paper folding to investigate the perpendicular bisectors of the sides of a triangle.

Activity 2

- Step 1** Draw and cut out two different triangles: one acute and one right.
- Step 2** Use paper folding to make the perpendicular bisector of each side of your acute triangle. What do you notice about the perpendicular bisectors?
- Step 3** Repeat Step 1 with your right triangle. Does your discovery from Step 2 still hold true?



Folding a perpendicular bisector

Exercises

- 1. Make a Conjecture** Make a conjecture about the bisectors of the angles of a triangle.
- 2. Make a Conjecture** Make a conjecture about the perpendicular bisectors of the sides of a triangle.
- 3. Extend** Draw and cut out an obtuse triangle. Fold the perpendicular bisectors.
 - a.** How do the results for your obtuse triangle compare to the results for your acute and right triangles from Activity 2?
 - b.** Based on your answer to part (a), how would you revise your conjecture in Exercise 2?
- 4. Extend** For what type of triangle would the three perpendicular bisectors and the three angle bisectors intersect at the same point?