

LESSON **7-4** **Technology Lab Recording Sheet** p. 480
Investigate Angle Bisector of a Triangle

Try This

Activity 1

2. Measure \overline{AB} , \overline{AC} , \overline{BD} , and \overline{CD} . Use these measurements to write ratios. What are the results?

Drag a vertex of $\triangle ABC$ and examine the ratios again. What do you notice?

Try This

1. Choose Tabulate and create a table using the four lengths and the ratios from Step 2. Drag a vertex of $\triangle ABC$ and add the new measurements to the table. What conjecture can you make about the segments created by an angle bisector?

2. Write a proportion based on your conjecture.

Activity 2

2. Find DI .

Find DG .

Find the perimeter of $\triangle DEF$.

3. Divide the length of \overline{DI} by the length of \overline{DG} . Add the lengths of \overline{DE} and \overline{DF} . Then divide this sum by the perimeter of $\triangle DEF$. Compare the two quotients. Drag a vertex of $\triangle DEF$ and examine the quotients again. What do you notice?

LESSON
7-4 **Technology Lab Recording Sheet**
Investigate Angle Bisector of a Triangle continued

4. Write a proportion based on your quotients.

What conjecture can you make about this relationship?

Try These

3. Show the hidden angle bisector of $\angle E$ or $\angle F$. Confirm that your conjecture is true for this bisector. Drag a vertex of $\triangle DEF$ and observe the results.

4. Choose Tabulate and create a table with the measurements you used in your proportion in Step 4.

Length	Ratios