The Law of Sines

Concepts • **Law of Sines** **Materials** • **TI-Nspire** • **TI-Nspire document**	**Objective:** **In this activity the student will explore the Law of Sines, a theorem involving sine ratios that applies to all triangles.**

1. Download the TI-Nspire document called *LawSines* to your handheld. Use TI-Nspire computer link. (Fig 1)

Fig1

2. Open the document in your handheld. Press Home, 7:MyDocuments, select the document *LawSines* using the NavPad (arrows), hit enter.(Figs 2-4)

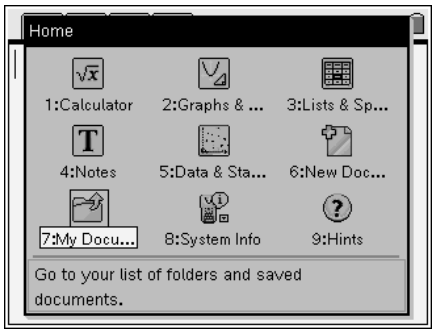

Fig 2

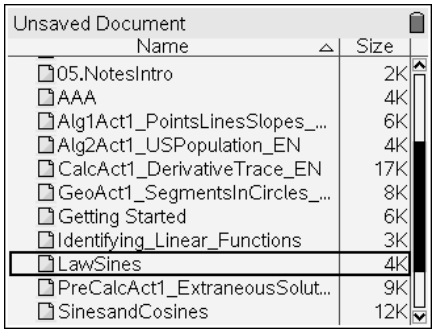

Fig3

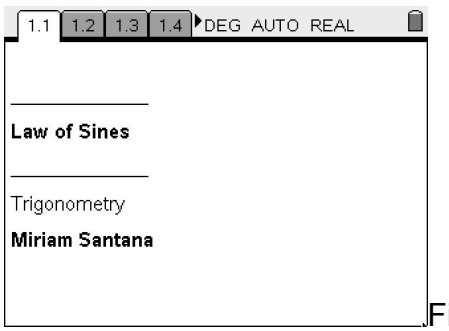

Fig4

Activity: Law of Sines

1. Go to problem 1. Page 1.3
   a. Press ctrl and use your NavPad (Fig 5)

2. Drag the vertices of the triangle.
- To drag a point move the cursor to the point by using your NavPad
- When the cursor becomes a hand press ctrl click to hold the point
- Move the point to a different position using the NavPad
- Press enter to drop the point (Fig6)

3. Each time that you modify the angle capture the angle and the values of sine and cosine. Press Ctrl + . to capture data. The data captured is in page 1.3 (Fig 7)

4. Repeat step 3. Capture at least 10 different triangles.
   - Compare columns G, H and I. What do you notice? (Fig 7)

5. Go to page 2.3 and 2.4

Write a conjecture using the data in the last three columns of the table (Fig 8 and Fig 9)

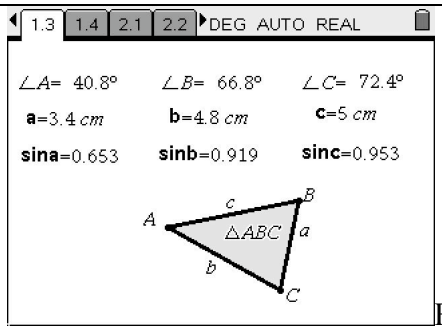

Fig 5

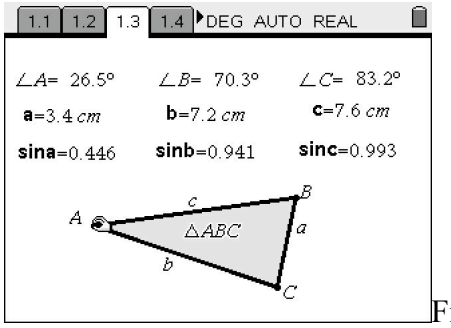

Fig6

Fig7

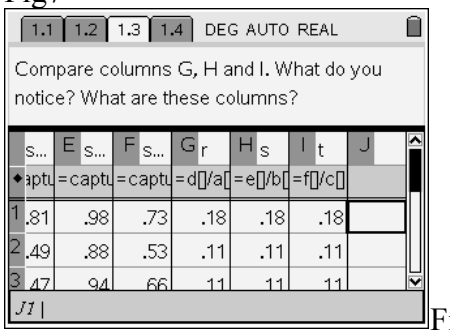

Fig7

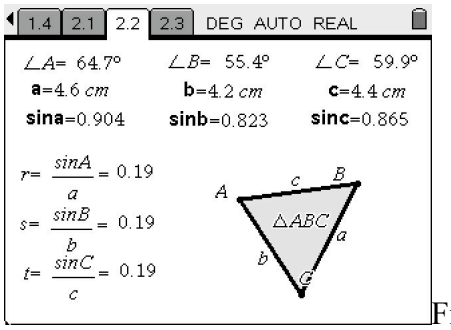

Fig 8

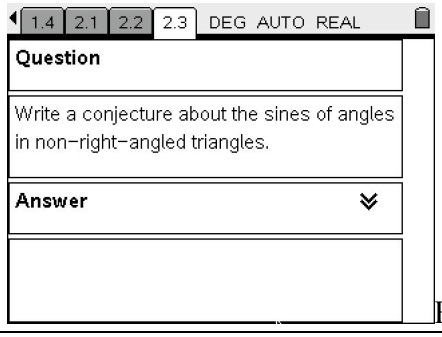

Fig 10