

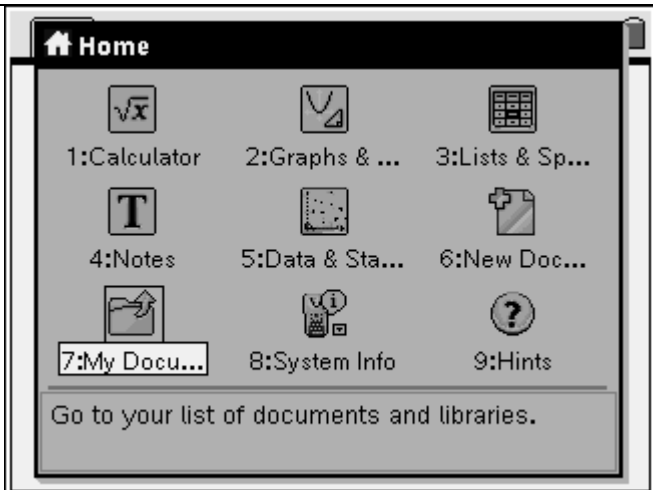

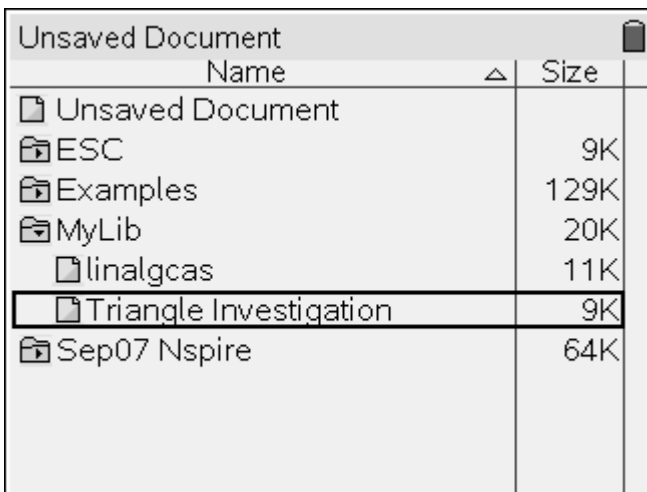




### Investigating the Relationship between the Sides of Right Triangles and Oblique Triangles


To open the document “Triangle Investigation”, press the  key and use the Nav Pad to arrow to 7:My Documents. Press .



Use the Nav Pad to arrow to the document “Triangle Investigation” and press .

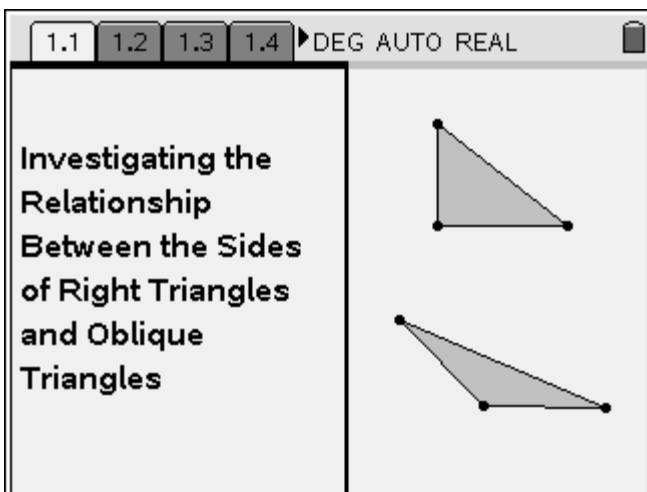


(The document may be in a folder that is closed. To open a folder, arrow to the folder and press . To close the folder, arrow to it again and press .)

The document opens to page 1.1. To move to page 1.2, press , then right arrow on the Nav Pad.

Read page 1.2 carefully using the Nav Pad to scroll to the bottom as you read.

Continue to page 1.3.



Use the Nav Pad to move the cursor to a vertex until the vertex is blinking and the cursor changes to a hand. Center click and hold until the hand closes as shown in the figure.

Drag the vertex around and observe the value of the expression  $a^2 + b^2 - c^2$ .

Press **(esc)** to release the vertex.

Adjust  $\triangle ABC$  so  $m\angle C = 90^\circ$ . Check your thinking on question #2 on your activity sheet.

Continue to page 1.4.

Page 2.1 is the first page of problem #2.

Read the directions and continue to pages 2.2 and 2.3.

Make sure your student activity sheet is completed through question #10.

Continue to page 3.1 which is the first page of problem #3 on your TI-Nspire handheld.

In problem #3 you will complete a manual data collection and graph the data you have collected.

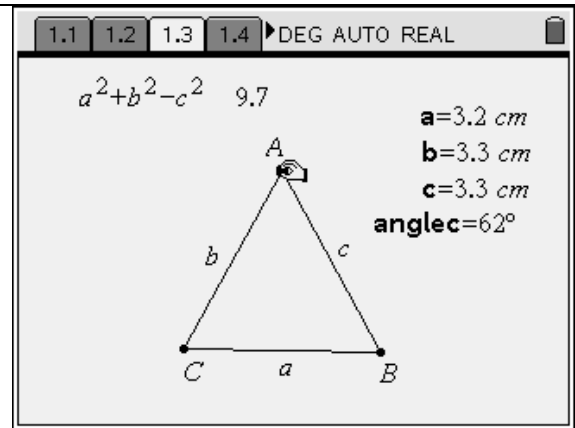
Read pages 3.1 – 3.4 carefully, then continue to page 3.5. Use the Nav Pad to move the cursor to vertex A until the vertex blinks and changes to a hand. Then center click and hold until the hand closes.

Move the vertex, then press **(ctrl)**. (Control decimal point). This will graph your first ordered pair,  $m\angle C$  on the x-axis and  $a^2 + b^2 - c^2$  on the y-axis. Move vertex A to another position, and press **(ctrl)**. again. Vary  $m\angle C$  from  $0^\circ - 180^\circ$  and collect several data points.

Return to the student activity sheet and complete questions 11- 13. To enter the function for #13, you will need to show the function entry line. To do this press **(menu)**, then 2:View, and 6:Show Entry Line.

Enter your function. As soon as you press enter, the function line will scroll to  $f2(x) =$ . Use the Nav Pad to arrow back up to  $f1(x) =$ .

Return to the student activity sheet and complete questions 14 – 19.



On the next page the lengths of side a and side b have been fixed at 3 cm, and 4 cm, respectively. Vary  $\angle C$  from  $0^\circ$  to  $180^\circ$  to check your thinking on questions 4 – 6.

