

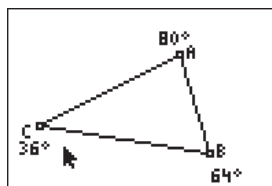
# Measuring Angles in a Triangle

Approximate  
Total Time:  
30 minutes

## ACTIVITY OVERVIEW:

### In this activity we will

- Draw a triangle
- Label the vertices
- Measure the interior angles
- Find the sum of the angles
- Change the angles of the triangle



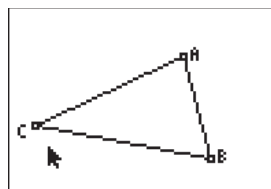
This activity provides a wonderful opportunity for discovery and conjecture about the sum of the angles in a triangle. It could also be used to reinforce a previous lesson about triangles and their interior angles.

**NCTM Geometry Standard:** Analyze characteristics and properties of 2- and 3-dimensional geometric shapes and develop mathematical arguments about geometric relationships.



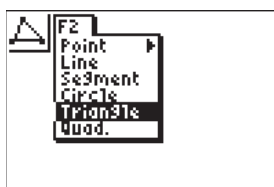
1

Press **[APPS]**. Move down to the Cabri Jr APP and press **[ENTER]**. Press **[Y=]** for the F1 menu and select **New**. (If asked to **Save changes?** press **[◀]** **[ENTER]** to choose "No.") Press **[ENTER]**, or any key, to begin using the application.



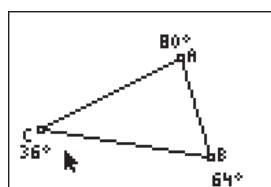
5

Move the cursor to vertex B and when the point is blinking, press **[ENTER]** **[APPS]** **[ENTER]** to label vertex B. Move to vertex C and when the point is blinking, press **[ENTER]** **[PRGM]** **[ENTER]** to label vertex C.



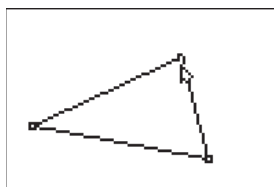
2

Press **[WINDOW]** for F2, move down to **Triangle** and press **[ENTER]**.



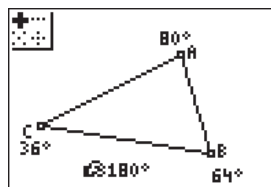
6

Use F5 to measure each angle. When you have measured angle A, use the *hand* to move the number to a convenient location. Press **[CLEAR]** then measure angle B. Repeat for angle C.



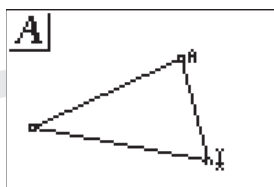
3

Move to the location of a vertex and press **[ENTER]**. Move to the second vertex and press **[ENTER]**. Move to the third vertex and press **[ENTER]**. Press **[CLEAR]** to exit the triangle drawing tool.



7

Press **[GRAPH]** for F5 and move down to **Calculate**. Press **[ENTER]**. Move the arrow until an angle measure has a flashing underline and press **[ENTER]**. Repeat this until the measures for all three vertices are flashing. Press **[+]** and the sum of the angle measures will be displayed.



4

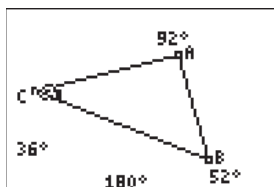
Press **[GRAPH]** for the F5 menu and move down to **Alpha-Num** and press **[ENTER]**. When the text cursor is near vertex A and the point is blinking, press **[ENTER]** **[MATH]** **[ENTER]** to label vertex A.



### For TI-Navigator™ Users

Use Screen Capture to identify problems with labeling. For help, see page 56.

# Measuring Angles in a Triangle



**8**

Press **CLEAR** **CLEAR** to disable the *hand* and to exit the calculate tool. Move to a vertex and when it is flashing, press **ALPHA**. Use the *hand* to move the vertex and record what happens to the angle measures and their sum. Move to a different vertex and explore changes there.



**9**

To exit the APP, press **Y=** for the F1 menu. Move to **Quit**, then press **ENTER**. (Or you can press **2nd** **MODE** for [QUIT].)

**10**

Based on their observations, students will be able to make a conjecture about the sum of the measures of the angles of a triangle.