
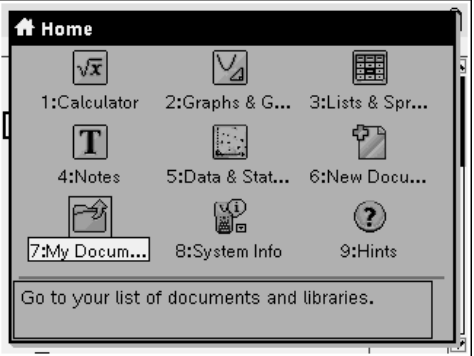

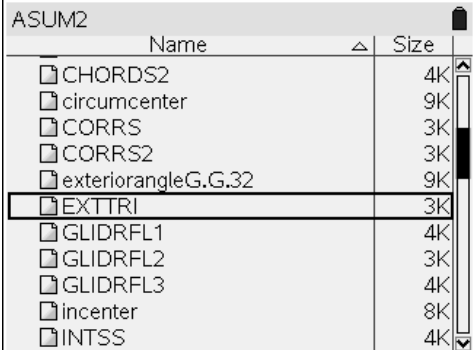

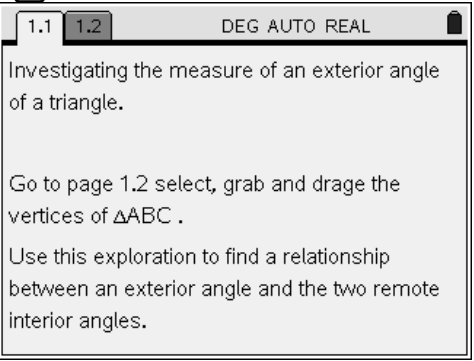

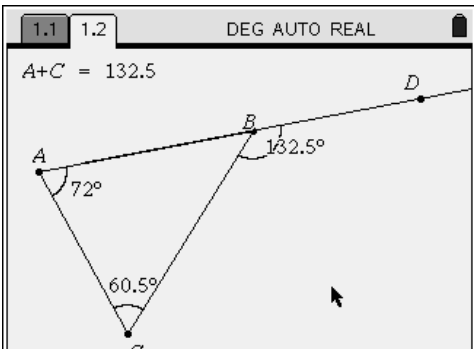


TI-Nspire Student Worksheet Exterior Angles of a Triangle

<p>After turning on your handheld press </p> 	<p>Select My documents </p> <p>Open Folder Geometry NY</p> <p>Select EXTTRI</p>  <table border="1"> <thead> <tr> <th>Name</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>CHORDS2</td><td>4K</td></tr> <tr><td>circumcenter</td><td>9K</td></tr> <tr><td>CORRS</td><td>3K</td></tr> <tr><td>CORRS2</td><td>3K</td></tr> <tr><td>exteriorangleG.G.32</td><td>9K</td></tr> <tr><td><b>EXTTRI</b></td><td><b>3K</b></td></tr> <tr><td>GLIDRFL1</td><td>4K</td></tr> <tr><td>GLIDRFL2</td><td>3K</td></tr> <tr><td>GLIDRFL3</td><td>4K</td></tr> <tr><td>incenter</td><td>8K</td></tr> <tr><td>INTSS</td><td>4K</td></tr> </tbody> </table>	Name	Size	CHORDS2	4K	circumcenter	9K	CORRS	3K	CORRS2	3K	exteriorangleG.G.32	9K	<b>EXTTRI</b>	<b>3K</b>	GLIDRFL1	4K	GLIDRFL2	3K	GLIDRFL3	4K	incenter	8K	INTSS	4K
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<p></p>  <p>Investigating the measure of an exterior angle of a triangle.</p> <p>Go to page 1.2 select, grab and drag the vertices of <math>\triangle ABC</math>.</p> <p>Use this exploration to find a relationship between an exterior angle and the two remote interior angles.</p>	<p></p>  <p><math>A+C = 132.5</math></p>																								
<p>Select, grab and drag the vertices of <math>\triangle ABC</math></p>	<p>Answer the questions that follow.</p>																								

- 1) Is  $\angle DBC$  in the interior or exterior of  $\triangle ABC$ ? \_\_\_\_\_
- 2) Is  $\angle BAC$  in the interior or exterior of  $\triangle ABC$ ? \_\_\_\_\_
- 3) Is  $\angle BCA$  in the interior or exterior of  $\triangle ABC$ ? \_\_\_\_\_
- 4) After exploring many triangles by dragging different points was there a relationship between the measures of  $\angle BCA$ ,  $\angle BAC$  and  $\angle DBC$ ? \_\_\_\_\_
- 5) If you found a relationship write a statement that describes this relationship.  
\_\_\_\_\_
- 6)  $\angle BAC$  and  $\angle BCA$  are referred to as remote interior angles with respect to  $\angle DBC$ . What is the name the adjacent interior angle? \_\_\_\_\_
- 7) What is the sum of  $\angle DBC$  and its adjacent interior angle? \_\_\_\_\_

8) Given the symbols,  $<$ ,  $>$ ,  $=$  place the correct symbol in each of the following:

A)  $\angle DBC$  \_\_\_\_\_  $\angle BCA$

B)  $\angle DBC$  \_\_\_\_\_  $\angle BAC$

Remember you can investigate many different situations by dragging a point.

9) Using your answers to question 8 write a statement about an exterior angle of a triangle and either remote interior angle.

10) Given the symbols,  $<$ ,  $>$ ,  $=$  place the correct symbol in each of the following:

A)  $\angle DBC + \angle CBA$  \_\_\_\_\_  $180^\circ$

B)  $\angle BCA + \angle BAC$  \_\_\_\_\_  $\angle DBC$

C)  $\angle BCA + \angle BAC + \angle CBA$  \_\_\_\_\_  $180^\circ$