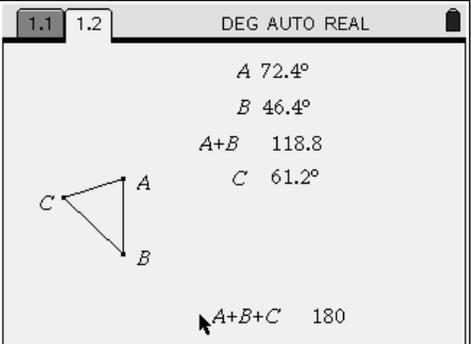


Teacher Notes

G.G.30 Investigate, justify, and apply theorems about the sum of the measures of the angles of a triangle

Lesson Launcher Objectives:

- 1) Discover that the sum of the angles of a triangle is 180 degrees.

<p>The student will open the .tns document ASUM2</p>  <p>The screenshot shows a geometry software window titled 'ASUM2'. It displays a triangle with vertices labeled A, B, and C. The angles are measured as follows: $A = 72.4^\circ$, $B = 46.4^\circ$, and $C = 61.2^\circ$. The sum of angles A and B is $A+B = 118.8$. The sum of all three angles is $A+B+C = 180$. The software interface includes a menu bar with '1.1', '1.2', and 'DEG AUTO REAL'.</p>	<p>As the student selects, grabs and drags the vertices of triangle ABC they will be able to draw a conclusion from their exploration.</p>
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- 1) As you dragged vertex A what measure(s) were changing? The measures of the angles and the sum $A+B$
- 2) As you dragged vertex A what measure(s) remained the same? The sum $A+B+C$ was always 180.
- 3) Press CLEAR and select vertex B to drag. As you dragged vertex B what measures were changing? The measures of the angles and the sum $A+B$
- 4) As you dragged vertex B what measures remained the same? The sum $A+B+C$ was always 180.
- 5) Press CLEAR and select vertex C to drag. As you dragged vertex C what measures were changing? The measures of the angles and the sum $A+B$
- 6) As you dragged vertex C what measures remained the same? The sum $A+B+C$ was always 180.
- 7) From your observations and answers to the previous questions what seems to be true regarding the sum of the angles of a triangle? 180 degrees
- 8) Write a statement which summarizes your observations. The sum of the angles of a triangle is 180 degrees.