Content Area: Math Grade Level: 8th Grade

Reporting Measure: Angles of Two-Dimensional Figures

Level	Description
Above & Beyond (4.0)	The student will: • Determine unknown angle measurements in complex diagrams of two-dimensional figures (for example, when given a triangle intersected by a line such that the line is parallel to the base of the triangle and partitions its other two sides, and when given the measure of one of the base angles of the triangle and the measure of the angle opposite the base, determine the measures of the other angles in the figure).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Proficient (3.0)	The student will: **ATF1—Demonstrate why the corresponding angles and alternate interior angles of parallel lines crossed by a transversal are congruent** (for example, use informal arguments involving rigid transformations or the properties of supplementary angles to show why the corresponding angles and alternate interior angles of parallel lines crossed by a transversal are congruent). **ATF2—Demonstrate the angle properties of triangles** (for example, use informal arguments involving the properties of supplementary angles and the angles of parallel lines crossed by a transversal to demonstrate that the angle measures of a triangle will always add up to $180°$, that an exterior angle of a triangle will be equal to the sum of its opposite interior angles, and that triangles with two angle measures in common are similar triangles).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Getting There (2.0)	**ATF1—**The student will recognize or recall specific vocabulary (for example, *adjacent angles*, *alternate interior angles*, *corresponding angles*, *supplementary angles*, *transversal*, *vertical angles*) and perform basic processes such as: • Identify supplementary angles on a diagram. • Calculate the measure of an unknown angle when given the measure of its supplementary angle. • Identify corresponding angles and alternate interior angles of parallel lines crossed by a transversal. • Explain that two figures are congruent if they can be mapped one atop the other by a sequence of rigid transformations (translation, reflection, and rotation). **ATF2—**The student will recognize or recall specific vocabulary (for example, *exterior angle*, *interior angle*) and perform basic processes such as: • Identify alternate interior angles of parallel lines crossed by a transversal. • Identify the alternate interior angles formed when a line is drawn through a vertex of a triangle and parallel to the opposite side of the triangle. For example, when given a triangle ABC and a line $\overleftrightarrow{DE}$ that passes through point B such that $\overleftrightarrow{DE} \parallel \overline{AC}$, identify $\overline{AB}$ and $\overline{CB}$ as transversals crossing parallel lines $\overleftrightarrow{DE}$ and $\overleftrightarrow{AC}$, identify $\angle ABD$ and $\angle CAB$ as alternate interior angles, and identify $\angle CBE$ and $\angle ACB$ as alternate interior angles. • State that the sum of the interior angles of a triangle is equal to $180°$. • Calculate the measure of an unknown angle of a triangle when given the measures of the other two angles.

	• Identify exterior angles of triangles.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
Beginning (1.0)	With help, partial success at score 2.0 content and score 3.0 content