Topic: Unit 4: Congruent Triangles (HON)   **Days:** 16

Subject(s): Math   **Grade(s):** 8th, 9th, 10th, 11th, 12th

Know:	Understand:	Do:
Key Vocabulary Types of triangles Triangle-Sum Theorem Exterior-Angle Theorem Triangle congruency postulates Transformations	Triangles and their properties will be understood and used.	Identify and classify triangles by angle and side measures Apply the Triangle-Sum Theorem Apply the Exterior-Angle Theorem Name and use corresponding parts of congruent triangle Prove triangles congruent using definition of congruence Use SSS, SAS, ASA, and AAS postulates to prove triangle congruence Use properties of isosceles and equilateral triangles Identify congruence transformations Verify congruence of figures after a congruence transformation Position and label triangles for use in coordinate proofs Use coordinate geometry to write proofs

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Which standards are students learning in this unit?

MA.912.G.2.2:
Determine the measures of interior and exterior angles of polygons, justifying the method used.
MA.912.G.2.4:
Apply transformations (translations, reflections, rotations, dilations, and scale factors) to polygons. to determine congruence, similarity, and symmetry. Know that images formed by translations, reflections, and rotations are congruent to the original shape. Create and verify tessellations of the plane using polygons.
MA.912.G.2.6:
Use coordinate geometry to prove properties of congruent, regular and similar polygons, and to perform transformations in the plane.
MA.912.G.4.1:
Classify, construct, and describe triangles that are right, acute, obtuse, scalene, isosceles, equilateral, and equiangular.
MA.912.G.4.3:
Construct triangles congruent to given triangles.
MA.912.G.4.4:
Use properties of congruent and similar triangles to solve problems involving lengths and areas.
MA.912.G.4.6:
Prove that triangles are congruent or similar and use the concept of corresponding parts of congruent triangles.
MA.912.G.4.8:
Use coordinate geometry to prove properties of congruent, regular, and similar triangles.
 MA.912.D.6.4:
Use methods of direct and indirect proof and determine whether a short proof is logically valid.
MA.912.G.8.5:
Write geometric proofs, including proofs by contradiction and proofs involving coordinate geometry. Use and compare a variety of ways to present deductive proofs, such as flow charts, paragraphs, two-column, and indirect proofs.
MA.912.G.8.6:
Perform basic constructions using straightedge and compass, and/or drawing programs describing and justifying the procedures used. Distinguish between sketching, constructing, and drawing geometric figures.
LA.910.1.6.5
The student will relate new vocabulary to familiar words;