

# 7th Grade Accelerated - Unit 8: Math - Geometry

Content Area: **Mathematics**  
Course(s): **Math 6, Generic Course**  
Time Period: **Generic Time Period**  
Length: **36 days**  
Status: **Published**

## Established Goals/Standards

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Please choose the appropriate Goals/Standards from the Standards tab above.

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|-------------|---|
| MA.8.G      | Geometry  |
| MA.8.G.A    | Understand congruence and similarity using physical models, transparencies, or geometry software.   |
| MA.8.G.A.1  | Verify experimentally the properties of rotations, reflections, and translations:   |
| MA.8.G.A.1a | Lines are transformed to lines, and line segments to line segments of the same length.  |
| MA.8.G.A.1b | Angles are transformed to angles of the same measure.   |
| MA.8.G.A.1c | Parallel lines are transformed to parallel lines.   |
| MA.8.G.A.2  | Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.                        |
| MA.8.G.A.3  | Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.  |
| MA.8.G.A.4  | Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. |
| MA.8.G.A.5  | Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.  |

## Essential Questions

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Please add your Essential Questions by clicking on the Lists tab above.

- How can you show that figures are congruent?
- How can you show that figures are similar?
- What are the possible relationships between pairs of angles?

## Enduring Understanding

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Please add your Enduring Understandings by clicking on the Lists tab above.

- Angle relationships are dependent upon their position in a geometric figure or diagram.
- You can show figures are congruent by proving their angles and sides are the same measure.

- You can show figures are similar by proving their angles are congruent and their sides are proportional.

## Content

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Students will be able to:

- Identify types of angles.
- Find angle measures by using their relationship.
- Identify parallel lines.
- Identify angles formed by parallel lines and transversals.
- Identify congruent figures and use them to solve problems.
- Identify similar figures and use proportions to find missing measurements.
- Prove that triangles are similar.
- Find the measures of angles in a polygon
- Graph and describe translations, reflections, rotations.
- Identify lines of symmetry
- Identify lines of rotational symmetry.
- Describe a sequence of transformations that map one figure onto another.
- Graph dilations.
- Determine the scale factor of a dilation.

Vocabulary:

- Adjacent angles
- Vertical angles
- Complimentary angles
- Supplemtary angles
- Interior and exterior angles
- Parallel
- Perpendicular
- Corresponding angles
- Similar figures
- Transversal
- Translation
- Reflection
- Rotation
- Dilation
- Angle of rotation
- Center of rotation
- Line of reflection
- Line of symmetry
- Reflectional symmetry
- Rotational symmetry
- Scale Factor

## Assessment

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## Resources

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- Pearson textbook and online resources
- Teacher made flip-charts
- Web-based activities ([mathplayground.com](http://mathplayground.com)) ([coolmath.com](http://coolmath.com))
- Teacher made worksheets/assessments
- mad minutes
- NJCTL.org (PMI math)
- Pizzazz series of worksheets