



MOHAWK

Local School District

Preparing today's students for tomorrow's challenges

Mohawk Local Schools 8th Grade Math

Quarter 4 Curriculum Guide

Mathematical Practices

1. Make Sense of Problems and Persevere in Solving them
2. Reasoning Abstractly & Quantitatively
3. Construct Viable Arguments and Critique the Reasoning of Others
4. Model with Mathematics
5. Use Appropriate Tools Strategically
6. Attend to Precision
7. Look for and Make use of Structure
8. Look for and Express Regularity in Repeated Reasoning

Critical Areas of Focus Being Addressed:

- Geometry

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product:
 (DOK1) (DOK2) (DOK3)
 (DOK4)

Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

8.G.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. (DOK 2)

(DOK 1)
 I can:

- Define similar triangles.
- Define and identify transversals Identify angles created when parallel line is cut by transversal (alternate interior, alternate

	<p>exterior, corresponding, vertical, adjacent, etc.) (DOK 2) I can:</p> <ul style="list-style-type: none"> • Justify that the sum of interior angles equals 180. (For example, arrange three copies of the same triangle so that the three angles appear to form a line.) • Justify that the exterior angle of a triangle is equal to the sum of the two remote interior angles. • Use Angle-Angle Criterion to prove similarity among triangles. (Give an argument in terms of transversals why this is so.)
<p>8.G.6 Explain a proof of the Pythagorean Theorem and it's converse. (DOK 1)</p>	<p>(DOK 1) I can:</p> <ul style="list-style-type: none"> • Define key vocabulary: square root, Pythagorean Theorem, right triangle, legs a & b, hypotenuse, sides, right angle, converse, base, height, proof. • Identify the legs and hypotenuse of a right triangle. • Explain a proof of the Pythagorean Theorem. • Explain a proof of the converse of the Pythagorean Theorem.
<p>8.G.7 Apply the Pythagorean theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. (DOK 2)</p>	<p>(DOK 1) I can:</p> <ul style="list-style-type: none"> • Recall the Pythagorean Theorem and its converse. <p>(DOK 2) I can:</p> <ul style="list-style-type: none"> • Determine how to create a right triangle from two points on a coordinate graph. • Use the Pythagorean Theorem to solve for the distance between the two points
<p>8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. (DOK 2)</p>	<p>(DOK 1) I can:</p> <ul style="list-style-type: none"> • Recall the Pythagorean Theorem and its converse. <p>(DOK 2) I can:</p>

	<ul style="list-style-type: none"> • Determine how to create a right triangle from two points on a coordinate graph. • Use the Pythagorean Theorem to solve for the distance between the two points
<p>8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. (DOK 2)</p>	<p>(DOK 1) I can:</p> <ul style="list-style-type: none"> • Identify and define vocabulary: cone, cylinder, sphere, radius, diameter, circumference, area, volume, pi, base, height • Recall and use the formulas for volume of cones, cylinders, and spheres. <p>(DOK 2) I can:</p> <ul style="list-style-type: none"> • Compare the volume of cones, cylinders, and spheres. • Determine and apply appropriate volume formulas in order to solve mathematical and real-world problems for the given shape. • Given the volume of a cone, cylinder, or sphere, find the radii, height, or approximate for π.