

Curriculum Coverage in 8th Grade Mathematics for the 2019-2020 School Year as Outlined by TN Standards

TN Standards Major Work of the Grade:

- Radical and integer exponents
- Functions
- Expressions and Equations
- Pythagorean Theorem

Supporting:

- Rational Numbers
- Transformation
- Volume of cylinders, cones, and spheres
- Scatterplots
- Probability

The Standards for Mathematical Practice

MP1. Make sense of problems and persevere in solving them.	MP2. Reason abstractly and quantitatively.	MP3. Construct viable arguments and critique the reasoning of others.	MP4. Model with mathematics.
MP5. Use appropriate tools strategically.	MP6. Attend to precision.	MP7. Look for and make use of structure.	MP8. Look for and express regularity in repeated reasoning.

TNStandards	Learning Outcomes	Instructional Focus	Content Resources
Systems of Equations (Allow 4 weeks for instruction, review, and assessment)			
<ul style="list-style-type: none"> • 8.EE.C.8 Analyze and solve pairs of simultaneous linear equations. b. Solve systems of two linear equations in two variables algebraically and estimate solutions by graphing the 	<p>I can solve a system of linear equations in two variables algebraically by graphing both equations to see at what point they intersect.</p> <p>I can solve a system of linear equations by substitution.</p>	<p>8.EE.C.8 Analyze a system of linear equations to determine if there is one solution, no solution or infinitely many solutions.</p> <p>Write pairs of simultaneous equations to represent a real-world problem.</p>	<p>Go Math Lesson: * Lesson 8.1 Solving Systems of Linear Equations by Graphing (pg. 227) Modify- Break this lesson down into 3 parts: 1) Pages 227 - 229 (solve by graphing) 2) Change equations into slope intercept</p>

<p>equations. Solve simple cases by inspection c. Solve real-world and mathematical problems leading to two linear equations in two variables.</p>	<p>I can solve contextual situations with systems of linear equations.</p>	<p>Solve a system of linear equations graphically.</p> <p>Solve a system of linear equations algebraically.</p> <p>Interpret the solution for systems of linear equations in terms of a given context.</p> <p>Determine the solution to the system they represent when given two pairs of coordinates.</p>	<p>form 3) Pages 230 - 231 (write a SOE to solve the problem, then graph to solve) *Pages 227 - 229 meets the requirement of standard 8.EE.C.8a ,but more practice will be needed. An entire lesson will be needed on changing equations into slope intercept form. (p. 230) Pages 230 - 231 Word problems (Write the SOE and then graph to solve) Examples of this type continue in each lesson in this module to give practice on different types of Word problems.</p> <p>* Lesson 8.2 Solving Systems by Substitution (pg. 235) Modify- Step 4 includes x-intercept Eliminate #14 and #15 or use for Enrichment *x-intercept not previously taught and doesn't align with standard)</p> <p>* Lesson 8.3 Solving Systems of Equations by Elimination (pg. 243)</p>
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<p>Pythagorean Theorem (Allow 3 weeks for instruction, review, and assessment)</p>			
<ul style="list-style-type: none"> • 8.G.B.4 Explain a proof of the Pythagorean Theorem and its converse. • 8.G.B.5 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. • 8.G.B.6 Apply the Pythagorean Theorem to find the distance between 	<p>I can know and understand the Pythagorean Theorem and how it applies to a right triangle.</p> <p>I can determine if a triangle is a right triangle by using the converse of the Pythagorean Theorem.</p> <p>I can determine the missing measure of the hypotenuse of a right triangle if given both of the measurements of the legs.</p> <p>I can determine the missing measure of a leg of a right triangle if given</p>	<p>8.G.B.4 Use a model to explain the Pythagorean Theorem.</p> <p>Justify a triangle as a right triangle using the converse of the Pythagorean Theorem.</p> <p>8.G.B.5 Apply the Pythagorean Theorem to solve real-world or mathematical problems in two dimensions.</p> <p>Apply the Pythagorean Theorem to solve real-world or mathematical problems in 3 dimensions when a visual representation is provided.</p>	<p>Go Math Lesson:</p> <ul style="list-style-type: none"> * Lesson 12.1 The Pythagorean Theorem (pg. 375) * Lesson 12.2 Converse of the Pythagorean Theorem (pg. 381) * Lesson 12.3 Distance Between Two Points (pg. 387) <p>Modify- Use Explore Activity for Enrichment. The distance formula is not required for the standard.</p> <p>Engage NY Task: Module 2, Topic D, The Pythagorean Theorem</p>

<p>two points in a coordinate system.</p>	<p>the measurement of one leg and the measure of the hypotenuse.</p> <p>I can use the Pythagorean Theorem to solve contextual problems involving rectangles or right triangles.</p> <p>I can use the Pythagorean Theorem to determine the distance between two points on a coordinate plane.</p>	<p>8.G.B.6 Find the distance between two points on a coordinate plane using the Pythagorean Theorem.</p> <p>Apply the Pythagorean Theorem to right triangles on a coordinate plane.</p>	<p>Module 3, Topic C, The Pythagorean Theorem</p> <p>Module 4, Topic E, The Pythagorean Theorem</p> <p>Module 7, Topic C, The Pythagorean Theorem</p>
<p>Angle Relationships (Allow 2 weeks for instruction, review, and assessment)</p>			
<ul style="list-style-type: none"> 8.G.A.3 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. <i>For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line and give an argument in terms of transversals why this is so.</i> 	<p>I can solve for the missing angle measurement of any triangle if given the other two measurements.</p> <p>I can Know and Understand that two parallel lines cut by a transversal forms 8 sets of angles.</p> <p>I can determine the relationship of vertical angles, corresponding angles, alternate interior angles, alternate exterior angles, supplementary angles, congruent angles.</p>	<p>8.G.A.3 Informally explain the triangle sum theory using three copies of a triangle.</p> <p>Give informal arguments to establish facts about the angle sum of triangles.</p> <p>Give informal arguments to establish facts about exterior angles of triangles.</p> <p>Informally explain the relationship of angles created by parallel lines cut by a transversal.</p> <p>Apply transformations to informally generate arguments for similarity of triangles.</p>	<p>Go Math Lesson:</p> <ul style="list-style-type: none"> * Lesson 11.1 Parallel Lines Cut by a Transversal (pg. 347) * Lesson 11.2 Angle Theorem for Triangles (pg. 353) <p>*Part of the standard requires students to apply transformations to generate arguments for similarity. This is covered in module 10.</p> <ul style="list-style-type: none"> * Lesson 11.3 Angle – Angle Similarity (pg. 361) <p>Engage NY Task: Module 2, Topic C, Congruence and Angle Relationships</p>

	<p>I can determine the remaining angle measures if given one measure on parallel lines cut by a transversal.</p>	<p>Justify missing interior and exterior angle measures of a triangle using facts about angle relationships.</p>	
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Resource Toolbox:

Additional Resources

[Mathematics Assessment Project](#)

[Illustrative Mathematics](#)

[Virtual Nerd](#)

[Khan Academy](#)

[Internet 4 Classrooms](#)

[Teacher Tube](#)

[Kuta Software](#)

[Illuminations](#)