

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.

TN Standards	Learning Outcomes	Instructional Focus	Content Resources
Transformations			
Allow 2 weeks for instruction, review, and assessment			
<ul style="list-style-type: none"> • 8.G.A.1 Verify experimentally the properties of rotations, reflections, and translations. <ol style="list-style-type: none"> Lines are taken to lines, and line segments to line 	I can translate a shape, line segment, or parallel lines by using a verbal description (right 5 units, up 7 units) on the coordinate plane.	8.G.A.1 Transform figures on the coordinate plane using rotations, reflections, and translations.	Go Math Lesson: * Lesson 9.1 Properties of Translations (pg. 279) Modify- https://www.engageny.org/resource/grade-8-mathematics-module-3

<p>segments of the same length.</p> <p>b. Angles are taken to angles of the same measure.</p> <p>c. Parallel lines are taken to parallel lines.</p> <ul style="list-style-type: none"> • 8.G.A.2 Describe the effects of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. 	<p>I can translate a shape, line segment, or parallel lines by using a mathematic description (-5 and -2) on the coordinate plane or without a coordinate plane.</p> <p>I can reflect a shape, line segment, or parallel lines over a line of reflection (vertical, horizontal, and diagonal lines of reflection) on the coordinate plane or without a coordinate plane.</p> <p>I can dilate a shape, line segment, or parallel lines based on the scale factor of the dilation on a coordinate plane or without a coordinate plane.</p> <p>I can understand that a scale factor of a number >1 is an enlargement and a scale factor of a number <1 is a reduction.</p> <p>I can rotate a shape or line segment around the origin on the coordinate plane.</p>	<p>Use the correct notation when labeling or describing a transformed figure.</p> <p>Verify the transformations used when transforming one figure onto another using manipulatives or on the coordinate plane.</p> <p>Verify that angle measures and lengths of line segments remain the same after translations, rotations and reflections.</p> <p>Verify that parallel lines remain parallel after translations, rotations and reflections.</p> <p>8.G.A.2 Describe how reflections affect the coordinates of any image.</p> <p>Describe how the rotation affects the coordinates of an image when given a degree of rotation.</p> <p>Use coordinate notation to describe the transformation</p>	<p>https://teacher.desmos.com/search?q=transformation</p> <p>* Lesson 9.2 Properties of Reflections (pg. 285)</p> <p>* Lesson 9.3 Properties of Rotations (pg. 291)</p> <p>* Lesson 9.4 Algebraic Representations of Transformations (pg. 297)</p> <p>* Lesson 9.5 Congruent Figures</p> <p>*Modify- See the above links</p> <p>* Lesson 10.1 Properties of Dilations (pg. 315)</p> <p>Modify- Eliminate the Explorer Activity #1. Supplement instruction with EngageNY, Topic 3, Lesson 6</p> <p>Doesn't align to the standard, Find the scale factor, additional practice needed</p> <p>* Lesson 10.2 Algebraic Representations of Dilations (pg. 327). Delete- You may use as enrichment. Doesn't align to the standard.</p> <p>* Lesson 10.3 Similar Figures (pg. 327)</p> <p>Doesn't align to the standard.</p> <p>Engage NY Task:</p> <p>Module 2, Topic A, B</p> <p>Definitions and Properties of Basic Rigid Motions</p> <p>Sequencing the Basic Rigid Motions</p> <p>Module 3, Topic A, B</p>
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	<p>I can perform a series of dilations on a coordinate plane.</p> <p>I can determine which transformation has occurred when looking at the pre-image and the new image.</p>	<p>when given an image and its pre-image.</p> <p>Identify images that undergo translations, reflections, and/or rotations as congruent figures.</p> <p>Identify images that are dilated as similar figures.</p> <p>Use coordinates of figures dilated from the origin to identify the scale factor between the image and the pre-image.</p> <p>Describe the effect a dilation will have on an image and its coordinates when given the scale factor.</p>	<p>Dilation Similar Figures</p>
<p>Volume of Curved Figures (Allow 2 weeks for instruction, review, and assessment)</p>			
<ul style="list-style-type: none"> 8.G.C.7 Know and understand the formulas for the volumes of cones, 	<p>I can know and understand the formula for the volume of a cylinder and use the formula to</p>	<p>8.G.C.7 Apply volume formulas to solve real-world or mathematical</p>	<p>Go Math Lesson: * Lesson 13.1 Volume of Cylinders (pg. 399) * Lesson 13.2 Volume of Cones (pg. 405)</p>

<p>cylinders, and spheres, and use them to solve real-world and mathematical problems.</p>	<p>solve for the volume of a cylinder in the appropriate units of measurement.</p> <p>I can know and understand that there are three cones in each cylinder with the same radius and height.</p> <p>I can know and understand the formula for the volume of a cone and use the formula to solve for the volume of a cone in the appropriate units of measurement.</p> <p>I can know and understand the formula for the volume of a sphere and use the formula to solve for the volume of a sphere in the appropriate units of measurement.</p> <p>I can apply each of the formulas of curved shapes to contextual problems involving cones, cylinders, and spheres.</p>	<p>problems involving cones, cylinders, and spheres.</p>	<p>* Lesson 13.3 Volume of Spheres (pg. 411)</p> <p>Engage NY Task: Module 5, Topic B, Volume</p>
<p>Compound Probability Allow 1 week for instruction, review, and assessment</p>			

<ul style="list-style-type: none"> • 8.SP.B.4 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. For an event described in everyday language (e.g. “rolling double sixes”), identify the outcomes in the sample space which compose the event. 	<p>I can represent the sample space of a compound event using an organized list, table, and tree diagram.</p> <p>I can identify the probability of a compound event using an organized list, table, and tree diagram.</p> <p>I can represent the probability of a compound event as a fraction of outcomes in the sample space for which the compound event occurs.</p>	<p>8.SP.B.4 Determine the sample space of a compound event.</p> <p>Use probabilities to make decisions in real-world situations.</p> <p>Recognize that the number of possible outcomes for a compound event is determined by multiplying the number of outcomes for each individual event.</p> <p>Determine the probability of compound events using lists, tables, tree diagrams, and simulations.</p> <p>Compare compound probabilities that are based on theoretical models with experimental probability simulations.</p> <p>Express the probability of a compound event as a fraction, decimal, and/or percent.</p>	
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Use Any Additional Time to Review for TN Ready

Pay attention to the blueprints for the Major Work of the Grade

Resource Toolbox:

Additional Resources

[Mathematics Assessment Project](#)

[Illustrative Mathematics](#)

[Virtual Nerd](#)

[Khan Academy](#)

[Internet 4 Classrooms](#)

[Teacher Tube](#)

[Kuta Software](#)

[Illuminations](#)