Lesson	Support Level	Notes
		Grade 8 Unit 1
8.1.1	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.1.2	2. Points to emphasize	If students struggle with identifying the type of transformation in the cool-down, plan to revisit types of transformations when opportunities arise over the next several lessons. For example, in Activity 2 Transformation Information of Lesson 3 make sure to invite multiple students to share their thinking about how they interpreted the data needed to make a transformation.
8.1.3	2. Points to emphasize	If students struggle with identfying transformations from rotations and reflections in the cool-down, plan to distinguishing the types of transformations when opportunities arise over the next several lessons. For example, in Activity 2 Name that Move of Lesson 4, share visuals of the types of transformations that show both the vocabulary and a representation of the movement.
8.1.4	2. Points to emphasize	If students struggle with identifying the type of transformation in the cool-down, plan to focus on identifying types of transformation when opportunities arise over the next several lessons. For example, in Activity 3, Transformations of a segment of Lesson 5, allow multiple students to share their drawings on tracing paper about rotations and translations. Ask students what moves describe a transformation, reflection, or rotation and make sure to invite multiple students to share their thinking about how to describe the three types of transformations.
8.1.5	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.1.6	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with identifying sequences of transformations, make time to revisit the work of Section 1 in the Unit 1, Lesson 4, Activity 2. See the Course Guide for ideas to help students re-engage with earlier work.
8.1.7	2. Points to emphasize	If students struggle with labeling the side lengths and the angle measures in the cool-down, plan to revisit activity 2 in the lesson. For example, in Activity 2 Sides and Angles of Lesson 7, use sequential order in the Geogbra applet and have students use tracing paper or a digital applet to follow along. Make sure to invite multiple students to share their thinking about the angle measures and side lengths.

Lesson	Support Level	Notes
8.1.8	2. Points to emphasize	If students struggle with labeling the side lengths and the angle measures in the cool-down, plan to revisit Activity 2 in the lesson. For example, in Activity 2 Rotating a Segment of Lesson 8, use sequential order in the Geogbra applet and have students use tracing paper or a digital applet to follow along. Make sure to invite multiple students to share their thinking about the angle measures and side lengths. Students should sure their thinking on how they identified the side lengths and side angles of each polygon.
8.1.9	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.1.10	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.1.11	2. Points to emphasize	If students struggle with identifying congruence and rigid transformations in the cool- down, plan to focus on identifying congruence when opportunities arise over the next several lessons. For example, in Activity 2 Congruent Pairs of Lesson 12, provide multiple opportunities for students to share their responses with tracing paper and to demonstrate their thinking or strategy for identifying the congruent pairs.
8.1.12	2. Points to emphasize	If students struggle with identifying congruence and rigid transformations in the cool- down, plan to focus on identifying congruence when opportunities arise over the next lesson. For example, in Activity 1 Not Just The Vertices of Lesson 13, provide multiple opportunities for students to share their responses with tracing paper and to demonstrate their thinking or strategy for finding the sequence of transformations by connecting line segment to line segment.
8.1.13	3. Press pause	By this point in the unit, there should be some student mastery of the concepts in this cool-down. If a student struggles with the concepts in this cool-down are widespread or ongoing, make time to examine related work in Lesson 12 Activities 2–3 Congruent Pairs parts 1 and 2. The Course Guide provides additional ideas for revisiting earlier work.
8.1.14	2. Points to emphasize	If students struggle with this cool-down, review Activity 2, Lesson 14 Cutting Parallel Lines with a transversal. Using tracing paper, along with a partner discussion for the notice and wonders for questions 4 and 5 will emphasize the concept of alternate interior angles being congruent.

Lesson	Support Level	Notes
8.1.15	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down in Lesson 16, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next lesson to support students in advancing their current understanding.
8.1.16	2. Points to emphasize	If students struggle with sum of interior angles in triangles in the cool-down, plan to revisit Activity 3, Every Triangle in the World of Lesson 16 to emphasize the argument of that the sum of all angles in a triangle is 180 degrees. The purpose of this activity is to provide a complete argument, not depending on the grid, of why the sum of the three angles in a triangle is 180 degrees. Revisiting this activity will emphasize the key understanding and concept of the sum of interior angles.
0447		
8.1.17	n/a	N/A
		Grade 8 Unit 2
8.2.1	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.2.2	2. Points to emphasize	If students struggle with scaling use the center of dilation in the cool-down, plan to revisit sequences of transformations and dilations when opportunities arise over the next several lessons. For example, in Activity 2 Dilation Obstacle Course of Lesson 3, make sure to invite multiple students to share their thinking about the relationship of scale factors to the dilation.
8.2.3	2. Points to emphasize	If students struggle with providing reasoning for identifying the center of a dilation in the cool-down, plan to revisit identifying center points of dilations when opportunities arise over the next several lessons. Also, consider spending more time on the lesson synthesis by annotating the learning goals and sharing students' understanding. For example, in Activity 2 Dilations on a Grid of Lesson 4, emphasize how the methods of finding a dilation are the same with or without a grid.
8.2.4	3. Press pause	If students struggle with this cool-down, and possibly previous related cool-downs, working with drawing dilations using scale factors make time to revisit the work of Lesson 4: Dilations on a Square Grid. See the Course Guide for ideas to help students re-engage with earlier work.

Lesson	Support Level	Notes
8.2.5	2. Points to emphasize	If students struggle with describing the dilation in the cool-down, plan to revisit the sequence of transformations for a dilation in the activity and lesson synthesis of this lesson. For example, in Activity 1: Many Dilations of the Same Triangle of Lesson 5, make sure to invite multiple students to share their thinking about how the size of the scale factor impacts the size of the dilation.
8.2.6	2. Points to emphasize	If students struggle with identifying the sequence of transformations for the dilation in the cool-down, plan to focus on sequences of transformations in Activity 2 of the lesson. For example, in Activity 2 Similarity Transformations of Lesson 6 ask students to recall the three types of rigid transformations and make sure to invite multiple students to share their thinking about sequences of the transformations they selected.
8.2.7	2. Points to emphasize	If students struggle with identifying how two figures are similar in the cool-down, plan to focus on similarity and congruence concepts when in this lesson, revisit the warm- up activity for students to share their thinking on congruence. For example, in Activity 1: All, Some, None: Congruence and Similarity of Lesson 7, make sure to invite multiple students to share their thinking about congruence and similarity.
8.2.8	2. Points to emphasize	If students struggle identifying similarity in triangles working with similar triangles, revisit Activity 3 Similar Figures in a Regular Pentagon of Lesson 8 which will allow students to share thinking on similarity using both similar side lengths and congruent angles.
8.2.9	2. Points to emphasize	If students struggle with identifying side length quotients in similar triangles in the cool-down, plan to revisit Activity 2 Quotients of Sides Within Similar Triangles of Lesson 9. In this activity, make sure to invite multiple students to share their thinking about how the division of side lengths result in similar triangles.
8.2.10	2. Points to emphasize	If students struggle with identifying slope in the cool-down, plan to revisit slope and its identification when opportunities arise over the next several lessons. Explain that whenever we have a (non vertical, non horizontal) line, we can construct triangles like these where one side is horizontal and one side is vertical, and the quotient of the length of the vertical side and the horizontal side will always be the same. This number is called the slope of the line. For example, in Activity 2 Similar Triangles on the Same Line of Lesson 10, make sure to invite multiple students to share their thinking about identifying the slope.
8.2.11	2. Points to emphasize	If students struggle with explaining how to find slope in the cool-down, plan to focus on strategies for finding slope when opportunities arise in the next lesson. For example, in Activity 2, Writing Relationships from Two Points of Lesson 12, ask students to share how they arrived at their equations. Also, ask them how the equation helps to determine whether or not this identifies the slope.

Lesson	Support Level	Notes
8 2 12	2 Points to emphasize	If students struggle with identifying a point on a line using equations in the cool- down, plan to revisit equations for lines from Activity 2 What We Mean by an equation of a line Lesson 11. Be sure to emphasize that the equation describes the relationship between the x_{z} and y_{z} -coordinate for every point on the line except (0, 0)
0.2.12		
8.2.13	n/a	As the final culminating lesson for the unit, students will apply the concepts of dilations, similarity and slope.
		Grade 8 Unit 3
8.3.1	1. More Chances	If students struggle with contextualizing the information in the graph, plan to reinforce the meaning of specific points on the graph in future lessons.
8.3.2	1. More Chances	If students struggle with distinguishing between the value of individual points on a line and the grid lines to establish slope then use the following lesson where students must create their own scaled axes to ask probing questions. Additionally, in the next lesson there is an opportunity to present two different student-created versions of the same relationship and ask students who may have missed this cooldown how they could know for sure that these two graphs represent the same relationship. (Note: calculating slope is ongoing work through to lesson 10)
8.3.3	2. Points to emphasize	It will be several lessons before students are asked to scale their own axes again. If students struggle to do this on the cool-down, consider using practice problem 2 from this lesson as an opportunity to practice again. For other mistakes, students continue graphing $y = kx$ -type situations in lesson 4, and the results of this cool-down can help a teacher focus on what points to emphasize.
8.3.4	3. Press pause	Students who struggle working with tables or equations of proportional relationships may benefit from revisiting work from 7.2 or 7.4.
8.3.5	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.3.6	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.

Lesson	Support Level	Notes
8.3.7	2. Points to emphasize	If students struggle with positive slopes in the cool-down, plan to revisit the definition of slope when opportunities arise over the next several lessons. For example, in the warm-up of Lesson 8, ask students to find the slope of several of the lines.
8.3.8	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.3.9	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.3.10	3. Press pause	Before beginning the warm-up for the next lesson, provide grid paper and ask students to graph the points from this cool-down and draw the line that goes through them. Select students to share their responses and reasoning
8.3.11	2. Points to emphasize	If students struggle with the cool-down, assess which type of equations they are struggling with most (horizontal lines, vertical lines, or the line with a negative slope.) Plan to use the practice problems from lesson 11 to offer more guided support on their specific area of need. While students will continue to work with linear equations, the next several lessons focus on standard form more than horizontal or vertical lines.
8.3.12	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.3.13	2. Points to emphasize	If students struggle to draw a line from two points or to determine whether an equation matches the line, plan to use the practice problems from this lesson to provide more guided practice. If students only check one point to determine whether the equation matches the line, then briefly revisit this cool-down before the start of class the next day since that error suggests students can successfully plug values in an equation to determine if it's true, but did not consider that it must be true for all ordered pairs to be the same line.
8.3.14	n/a	N/A
Grade 8 Unit 4		

©2020 Illustrative Mathematics, Licensed CC-BY 4.0 https://creativecommons.org/licenses/by/4.0/

Lesson	Support Level	Notes
8.4.1	1. More Chances	This is an intro lesson to get students back into the mindset of solving for an unknown, which they've not done since grade 7. They will have more chances over the next several lessons to work on multi-step equations.
8.4.2	2. Points to emphasize	If students struggle with naming moves, plan to use the following lesson to have students reflect on and review the types of hanger diagram moves that keep the hanger balanced. The digital applets for hanger diagrams are featured in lesson 2 and those may be a great resource for students to check their own reasoning about whether the equations will stay balanced.
8.4.3	1. More Chances	Students will have more opportunities to name the moves for keeping equations balanced while moving towards solving, however they won't be prompted as explicitly to name or label the moves. Therefore, teachers should prompt students to name the moves they are using and recognizing.
8.4.4	1. More Chances	Students will have more opportunities to develop procedural fluency in solving multi- step equations. The card sort in the following lesson provides a great opportunity to reinforce concepts from this cool-down.
8.4.5	1. More Chances	Students will have more opportunities to develop procedural fluency in solving multi- step equations. Practice problem 2, however, provides a similar error analysis to this cool-down.
8.4.6	2. Points to emphasize	If students struggle, plan to discuss the answer to the first problem in the cool-down so that students can hear how other students recognized the solution must be positive. If students struggle to operate with negative numbers in the second part of the cool-down, leverage the practice problems to provide extra attempts with discussion.
8.4.7	1. More Chances	Students will have more opportunities to write equations so that there are 1, infinite, or 0 solutions. Practice problem 3 provides additional practice with this particular skill.
8.4.8	2. Points to emphasize	If students cannot recognize and define the structure of equations that makes them true for 1, 0 or all x, plan to share examples of student reasoning that is incomplete (for example, it's true because it would be $36x$ on each side) and ask students to generate a counterexample (like $36x + 5 = 36x + 4$ is not true for any x). Allow students to revise their initial thinking on their cool-downs.
8.4.9	2. Points to emphasize	If students struggle to interpret the context, plan to highlight student work that draws clear connections through labeled equations with defined variables and have students discuss it. Though the graphing of systems of equations isn't discussed until the following lesson, it may be helpful to show a graph of both lines as a lead in to lesson 10.
8.4.10	1. More Chances	Students will have more opportunities to explain the context of individual solutions on lines. Practice problem 5 invites students to create and interpret a graph of a situation easily represented in standard form.

Lesson	Support Level	Notes
8.4.11	2. Points to emphasize	If students struggle to graph and interpret the relationship correctly, plan to leverage practice problem 1 as a further opportunity to discuss and compare two different savings plans.
8.4.12	3. Press pause	Before beginning the warm-up for the next lesson, provide grid paper and ask students to graph the points from this cool-down using two different x and y tables if needed and draw the line that goes through them. Select students to share their responses and reasoning, including what the point of intersection means.
8.4.13	1. More Chances	Students will have more opportunities to write equations of lines based on features in graphs and to determine the number of solutions.
8.4.14	2. Points to emphasize	If students struggle to solve a system of equations algebraically, plan to have two different students share their strategies during the following lesson (in this case, substitution could be easily used for y or x). The practice problems can be used to reinforce student understanding.
8.4.15	3. Press pause	Before beginning the warm-up for the next lesson, assign students in pairs to work through the cool-down from the day before and encourage them to check their own answer by checking if the solution (x, y) is true for both equations. Have students analyze and reflect on any mistakes.
8.4.16	n/a	N/A
		Grade 8 Unit 5
8.5.1	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.2	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.3	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with creating equations from functions, make time to revisit the work of Lesson 3, Activity 2. This activity allows students to see the concept of input and output in an equation with visual representations. See the Course Guide for ideas to help students re-engage with earlier work.

Lesson	Support Level	Notes
8.5.4	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.5	2. Points to emphasize	If students struggle with describing the functions of the graphs in the cool-down, plan to revisit interpreting graphs when opportunities arise over the next several lessons. For example, in Activity 1 of Lesson 6, emphasize the independent and dependent variable in modeling the context which directly links to the cool-down.
8.5.6	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with graphs of functions, make time to revisit the work of Section 2: Representing and Interpreting Functions. See the Course Guide for ideas to help students re-engage with earlier work.
8.5.7	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with representations of functions, make time to revisit the work of Section 2: Representing and Interpreting Functions See the Course Guide for ideas to help students re-engage with earlier work.
8.5.8	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.9	2. Points to emphasize	If students struggle with identifying a single linear model in the cool-down, plan to revisit linear models when opportunities arise over the next several lessons. For example, in Activity 2 of Lesson 10, make sure to invite multiple students to share their thinking about linear functions. Be sure to emphasize mathematical models as a mathematical object like an equation, a function, or a geometric figure that we use to represent a real-life situation.
8.5.10	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with linear functions and rates of change, make time to revisit the work of Section 3, Linear Functions and Rates of Change: Unit 5. See the Course Guide for ideas to help students re-engage with earlier work.
8.5.11	2. Points to emphasize	If students struggle with identifying cylinders and volume in the cool-down, plan to revisit diameter and radius of a cylinder when opportunities arise over the next several lessons. For example, in Activity 2 of Lesson 13, Circular Volumes, make sure to invite multiple students to share their thinking about the features of cylinders and their representations based on area of circles.

Lesson	Support Level	Notes
8.5.12	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.13	2. Points to emphasize	If students struggle with finding volume of a cylinder in the cool-down, plan to focus on volume of a cylinder when opportunities arise over the next several lessons. For example, in Activity 3 of Lesson 14, Cylinders with Unknown Dimensions, make sure to invite multiple students to share their thinking patterns and the process for finding the unknown dimensions.
8.5.14	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with volume of a cylinder, make time to revisit the work of Unit 5: Cylinders and Cones. See the Course Guide for ideas to help students re-engage with earlier work.
8.5.15	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.16	2. Points to emphasize	If students struggle with finding the volume of a cone in the cool-down, plan to revisit calculating volume of a cone from this lesson to emphasize the learning target. For example, in Activity 3 of Lesson 16, Cones with Unknown Dimensions, make sure to invite multiple students to share their thinking by selecting a few rows of the table, and ask students how they might find the volume of a cylinder with the same radius and height as the cone.
8.5.17	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.18	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.5.19	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.

Lesson	Support Level	Notes
8.5.20	2. Points to emphasize	If students struggle with finding volume of spheres in the cool-down, plan to revisit the volume of spheres when opportunities arise over the next several lessons. For example, in Activity 3 of Lesson 20, Spheres in Cylinders, make sure to invite multiple students to share their methods for calculating the volume of a sphere.
8.5.21	3. Press pause	If students struggle with this cool-down, and possibly previous related cool-downs, working with Volume of Cylinders, Cones and Spheres, make time to revisit the work of Unit 5: Dimensions and Spheres. See the Course Guide for ideas to help students re-engage with earlier work.
8.5.22	n/a	N/A
		Grade 8 Unit 6
8.6.1	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.6.2	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.6.3	2. Points to emphasize	If students struggle with reading scatter plots and identifying points from scatter plots in the cool-down, plan to revisit reading scatter plots when opportunities arise over the next several lessons. For example, in Activity 3: Coat Sales of Lesson 3, make sure to invite multiple students to share their thinking about interpreting data points on the scatterplot and extracting information from the table.
8.6.4	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.6.5	2. Points to emphasize	If students struggle with analyzing lines of fit in the cool-down, plan to focus on identifying good lines of fit when opportunities arise over the next several lessons. For example, in Activity 2: Describing Linear Associations of Lesson 6, make sure to invite multiple students to share their thinking about the associations between independent and dependent variables.

Lesson	Support Level	Notes
8.6.6	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with linear models in scatter plots, make time to revisit the work of Unit 6: Section 2. See the Course Guide for ideas to help students re-engage with earlier work.
8.6.7	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with linear models and associations in scatter plots, make time to revisit the work of Unit 6: Section 2. See the Course Guide for ideas to help students re- engage with earlier work.
8.6.8	3. Press pause	By this point in the unit, there should be some student mastery of the concepts in this cool-down. If a student struggles with the concepts in this cool-down are widespread or ongoing, make time to examine related work in Unit 6: Section 2. The Course Guide provides additional ideas for revisiting earlier work.
8.6.9	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.6.10	3. Press pause	If students struggle with this cool-down, and possibly previous related cool-downs, working with two-way tables and segmented bar graphs, make time to revisit the work of Unit 6: Section 3. See the Course Guide for ideas to help students re- engage with earlier work.
8.6.11	n/a	This is the culminating lesson of the unit that doesn't contain a cool-down.
		Grade 8 Unit 7
8.7.1	3. Press pause	If students struggle with this cool-down, working with exponents, make time to revisit the work of Grade 6: Unit 6 Working with Exponents. See the Course Guide for ideas to help students re-engage with earlier work.
8.7.2	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.

Lesson	Support Level	Notes
8.7.3	2. Points to emphasize	If students struggle with multiplying powers of ten in the cool-down, plan to focus on multiplying exponents and powers of ten when opportunities arise over the next several lessons. For example, in Activity 4 of Lesson 4, make sure to invite multiple students to share their thinking about exponents rules and how to represent the numbers in varying ways.
8.7.4	2. Points to emphasize	If students struggle with dividing powers of ten in the cool-down, plan to revisit dividing exponents when opportunities arise over the next several lessons. For example, in Activity 3 of Lesson 6, ask this question "What mistakes might lead to an expression that is not equivalent to the original expression?"
8.7.5	2. Points to emphasize	If students struggle with negative exponents in the cool-down, plan to revisit negative exponents when opportunities arise over the next several lessons. For example, in Activity 2: What happens with zero and negative exponents of Lesson 6, make sure to invite multiple students to share their thinking negative exponents focusing on question 5.
8.7.6	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.7.7	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with exponent rules, make time to revisit the work of Unit 7, Section 1: Exponent Rules. See the Course Guide for ideas to help students re-engage with earlier work.
8.7.8	3. Press pause	If students struggle with this cool-down, and possibly previous related cool-downs, working with exponent rules, make time to revisit the work of Unit 7, Section 1: Exponent Rules. See the Course Guide for ideas to help students re-engage with earlier work.
8.7.9	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.7.10	2. Points to emphasize	If students struggle with representing large numbers as a power of ten in the cool- down, plan to revisit representing large numbers with the power of ten when opportunities arise over the next several lessons. For example, in Activity 3: Atomic Scale of Lesson 11, make sure to invite multiple students to share their thinking about moving numbers with decimals and multiples of the power of ten.

Lesson	Support Level	Notes		
8.7.11	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with representing large and small numbers with the power of 10, make time to revisit the work of Unit 7: Scientific Notation. See the Course Guide for ideas to help students re-engage with earlier work.		
8.7.12	2. Points to emphasize	If students struggle with arithmetic with powers of 10 in the cool-down, plan to focus on arithmetic with scientific notation when opportunities arise over the next several lessons. For example, in Activity 2: Measuring the Planets of Lesson 15, make sure to invite multiple students to share their thinking about strategies and methods for the arithmetic.		
8.7.13	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with scientific notation, make time to revisit the work of Unit 7: Scientific Notation. See the Course Guide for ideas to help students re-engage with earlier work.		
8.7.14	2. Points to emphasize	If students struggle with multiplying, dividing, and estimating with scientific notation in the cool-down, plan to revisit multiplying, dividing and, estimation with scientific notation when opportunities arise over the next several lessons. For example, in Activity 2: Measuring the Planets of Lesson 15, make sure to invite multiple students to share their thinking about their reasoning for estimation.		
8.7.15	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with Scientific notation, make time to revisit the work of Unit 7: Scientific Notation. See the Course Guide for ideas to help students re-engage with earlier work.		
8.7.16	n/a	n/a		
Grade 8 Unit 8				
8.8.1	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.		
8.8.2	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.		

Lesson	Support Level	Notes
8.8.3	2. Points to emphasize	If students struggle with defining rational and irrational numbers in the cool-down, plan to revisit irrational numbers when opportunities arise over the next several lessons. For example, in Activity 3: Solutions on a Number Line of Lesson 5, invite multiple students to share their thinking about irrational numbers on a line to deepen understanding of its approximation.
8.8.4	2. Points to emphasize	If students struggle with square roots of irrational numbers in the cool-down, plan to focus on square root values when opportunities arise over the next several lessons. For example, in Activity 2: Square Root Values of Lesson 5, ask students to discuss the two whole numbers a number lies between and make sure to invite multiple students to share their thinking about placement on a number line.
8.8.5	3. Press pause	By this point in the unit, there should be some student mastery of the concepts in this cool-down. If a student struggles with the concepts in this cool-down are widespread or ongoing, make time to examine related work in Section 1: Square Roots and Side Lengths. The Course Guide provides additional ideas for revisiting earlier work.
8.8.6	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.8.7	2. Points to emphasize	If students struggle with proving The Pythagorean Theorem in the cool-down, plan to revisit the theorem and its proof when opportunities arise over the next several lessons. For example, in Activity 3: Find the Missing Side Lengths of Lesson 8, make sure to invite multiple students to share their thinking about how they found missing side lengths.
8.8.8	2. Points to emphasize	If students struggle with finding unknown side lengths in the cool-down, plan to focus on calculating side lengths when opportunities arise over the next several lessons. For example, in Activity 3: Calculating Side Lengths of Lesson 9, make sure to invite multiple students to share their thinking about how right triangles are formed using legs and the hypotenuse.
8.8.9	3. Press pause	By this point in the unit, there should be some student mastery of the concepts in this cool-down. If a student struggles with the concepts in this cool-down are widespread or ongoing, make time to examine related work in Section 2: Unit 8. The Course Guide provides additional ideas for revisiting earlier work.
8.8.10	3. Press pause	By this point in the unit, there should be some student mastery of the concepts in this cool-down. If a student struggles with the concepts in this cool-down are widespread or ongoing, make time to examine related work in Section 2: Unit 8. The Course Guide provides additional ideas for revisiting earlier work.

Lesson	Support Level	Notes
8.8.11	2. Points to emphasize	If students struggle with finding distance using Pythagorean Theorem in the cool- down, plan to revisit distance using Pythagorean Theorem in this lesson's activities. For example, in Activity 4: Finding the Right Distance of Lesson 11, make sure to invite multiple students to share their thinking about methods to find distances.
8.8.12	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding
8.8.13	3. Press pause	If students struggle with this cool-down, and possibly previous, related cool-downs, working with cube roots, make time to revisit the work of Unit 8: Side Lengths and Volume of Cubes. See the Course Guide for ideas to help students re-engage with earlier work.
8.8.14	1. More Chances	Students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding.
8.8.15	2. Points to emphasize	If students struggle with identifying rational and irrational numbers in the cool-down, plan to revisit irrational and rational numbers in this lesson. For example, in Activity 3: Some Numbers are not rational of Lesson 15, make sure to invite multiple students to share their thinking about how to determine whether a number is rational or irrational using long division.
8.8.16	n/a	N/A