Publisher/Developer: *Amplify Education, Inc.*

Program Title: *Amplify Desmos Math California, Grade 7*

Components: *Teacher Edition; Student Edition; Assessment Resources; Intervention, Extension, and Investigation Resources; Math Language Development Resources; Additional Practice Resources; Additional Practice Student Workbook; Student Digital License; Teacher Digital License*

Approved by the State Board of Education January 18, 2024

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# 2025 California Common Core State Standards: Mathematics Adoption[[1]](#footnote-0) Standards Map Template

## Grade Seven

### Organization Around Major Conceptual Ideas

Evaluation criterion statement 1.2 requires that programs be consistent with the content of the 2023 *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve* (*Mathematics Framework*). In order to be considered suitable for adoption by the SBE, a publisher's or developer’s program must present content organized around major conceptual ideas, as demonstrated in chapters 6, 7, and 8, and as described in the Publishers and Content Developers Guide to the Mathematics Framework, found in chapter 13 of the *Mathematics Framework*.

1. Publishers/developers should use the first column of this table to list the major conceptual ideas used to organize the instructional program.
2. In the second column, publishers/developers should show how these relate to the Framework’s Big Ideas.
3. In the third column, publishers/developers should show the organization of the program by showing how the content standards are mapped to each of the major conceptual ideas or Big Ideas used by the program.

| **Major Conceptual Ideas in the Program** | **How do the program’s Major Conceptual Ideas map to the Framework’s Big Ideas?** | **How are Standards Covered under the Major Conceptual Ideas?** | **Met Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| **Unit 1:** Scale Drawings  *Recognize, describe, and apply proportional relationships between scaled geometrical figures in a variety of contexts.* | * **Scale Drawings:** Students explore and describe the characteristics of scaled figures, recognizing that a scale factor is used to create scaled copies. They study how different scale factors affect the area of scaled copies, noticing that the area is not scaled by the same scale factor as the side lengths. Students connect scale as a unit rate and determine actual and scaled distances from real-world scale drawings. They choose appropriate scales to create scale drawings of different sizes. In Task 1 of Investigation 1: *Interior Design Room*, students create a blueprint for their dream bedroom to prepare for Task 2 in Unit 7 in which they will visualize their 3-D rooms as 2-D blueprints, calculate the surface area to determine the amount of paint needed, and participate in a Gallery Tour to communicate their results. This Investigation also addresses the Big Ideas **Shapes in the World** and **Proportional Relationships**. * **Shapes in the World:** Students apply their understanding of scale and scale factors to solve real-world problems involving shapes found around the world using actual and scaled distances from scale drawings. * **Proportional Relationships:** Students explore scaled scopies and scale drawings and understand that scaled geometric figures have proportional side lengths. * **Unit Rates in the World:** Students connect the idea of a scale factor to a unit rate and use equations involving scale factors to solve problems.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.RP.1:** Through contexts of tiles, state shapes, and team logos, students connect the idea of a scale factor to a unit rate and calculate with scale factors. * **7.RP.2.a:** Students understand that scaled copies have proportional side lengths. * **7.RP.2.b:** Students understand the scale factor as a ratio of new to original lengths, which represents a unit rate. * **7.RP.3:** Students reason about proportional relationships as they explore how scale factors are related to scale drawings. * **7.G.1:** Through contexts of robot design, mosaics, basketball courts, state shapes, and buildings around the world, students explore scale drawings of geometric figures, calculate scaled and actual lengths and areas, and reproduce scale drawings at different scales. * **7.G.6:** Students explore how different scale factors affect the area of scaled copies and use scale drawings to determine actual areas. |  |  |  |
| **Unit 2:** Proportional Relationships  *Use tables, graphs, and equations to deepen understanding of what it means for two quantities to be in a proportional relationship.* | * **Proportional Relationships:** Students make sense of proportional relationships. They explore tables, equations of the form *y* = *kx*, and graphs that represent real-world proportional relationships, and identify the constant of proportionality in each representation. * **Unit Rates in the World:** Students analyze tables of equivalent ratios and use a variety of strategies, such as calculating unit rates, to determine whether ratios are equivalent. They recognize the constant of proportionality of a proportional relationship as a unit rate and identify the unit rate in tables, graphs, and equations that represent proportional relationships. * **Graphing Relationships:** Using graphs that represent proportional relationships, students solve problems and predict and interpret points on the graph, including the constant of proportionality.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.RP.1:** Through the context of food recipes, students calculate unit rates (as the constant of proportionality), including those involving ratios of fractions. * **7.RP.2.a:** Students use tables of equivalent ratios and graphs to determine whether two quantities are in a proportional relationship. * **7.RP.2.b:** Students identify the constant of proportionality, recognizing it as the unit rate in multiple representations of proportional relationships. * **7.RP.2.c:** Using real-world contexts — including robot design, travel times, recipes, and turtle races — students represent proportional relationships with equations of the form *y* = *kx*, where *k* is the constant of proportionality. * **7.RP.2.d:** Using graphs of proportional relationships related to gas mileage of various vehicles, students interpret points on the graph within context and understand what the points (0, 0) and (1, *r*) represent, where *r* is the unit rate. * **7.EE.3:** Students calculate with positive rational numbers to solve problems involving proportional relationships. * **7.EE.4:** Through real-world contexts — such as robot design, travel times, turtle races, and water efficiency, students write equations to represent proportional relationships. |  |  |  |
| **Unit 3:** Measuring Circles  *Recognize through measurements, graphs, and dynamic geometry visualizations that the relationship between a circle’s circumference and diameter is a proportional relationship, and calculate measurements of circles to solve real-world problems.* | * **Proportional Relationships:** Students recognize the proportional relationship between the circumference of a circle and its diameter. * **Unit Rates in the World:** Students use equations to solve real-world problems involving the circumference and area of circles, recognizing *π* as the unit rate in the equation *C* = *πd*. * **Graphing Relationships:** Students use graphs to explore the proportional relationship between the circumference of a circle and its diameter. * **2D and 3D Connections:** Students explore and construct circles of various sizes, defining and connecting the measures (radius and diameter) that determine the size of a circle. * **Shapes in the World:** Students use real-world circular objects to recognize the proportional relationship between the circumference of a circle and its diameter. They solve real-world problems by calculating the perimeter of complex shapes composed of squares and fractions of circles.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.RP.2.a:** Through dynamic geometry software and measurement calculations, students use graphs to observe that the circumference of a circle is proportional to its diameter, but that the area of the circle is not proportional to its diameter or radius. * **7.RP.2.b:** As students explore the proportional relationship between the circumference of a circle and its diameter, they understand and identify *π* as the constant of proportionality (unit rate). * **7.EE.4:** Students use variables in equations, such as *C* = *πd* and *A* = *πr*2, to calculate measurements in circles. * **7.G.1:** Students use toothpicks and dynamic geometry software to discover that some relationships in scaled copies of geometric figures are proportional. * **7.G.2:** Students construct and describe circles with varying radii to discover relationships among the center, radius, and diameter of a circle. * **7.G.4:** Students use formulas to both approximate and determine the exact circumference and area of circles. They use the relationship between circumference and area to derive the formula for the area of a circle. * **7.G.6:** Students solve real-world problems where they determine whether to calculate the circumference or area of circular objects. |  |  |  |
| **Unit 4:** Proportional Relationships and Percentages  *Recognize percentages as rates and apply proportional reasoning to solve multi-step problems involving percentages in a variety of contexts.* | * **Proportional Relationships:** Students use tools, such as tables, graphs, constants of proportionality, and scale factors to determine unknown values and solve problems involving proportional relationships, including those involving fractional quantities. They apply proportional reasoning to solve multi-step percentage problems involving sales tax, tips, discounts, markups, percent error, and percent increase or decrease. * **Unit Rates in the World:** Students use equations to represent and solve problems involving proportional relationships and recognize the unit rate in tape diagrams, double number lines, equations, and tables. * **Scale Drawings:** Students apply proportional reasoning to solve problems involving scale factors and scale drawings as they explore the sizes of stickers.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.RP.1:** Students calculate unit rates, including those involving ratios of fractions, to solve problems involving sticker sizes and recipes. * **7.RP.2.c:** Students represent proportional relationships with equations, such as percent error, in the context of building a bookcase. * **7.RP.3:** Students apply proportional reasoning to solve real-world, multi-step problems involving percentages, such as percent increase and percent decrease, using contexts such as measurement, sales tax, and tips. * **7.NS.2.d:** Students convert fractions to decimals using long division, and reason about repeated calculations to notice when the decimal form terminates in 0s or eventually repeats. * **7.NS.3:** Students add, subtract, multiply, and divide with positive rational numbers as they solve real-world problems, such as comparing sizes of granola bar boxes and analyzing fruit production. * **7.EE.2:** Students write expressions in different forms, such as (1 – 0.72)*b* and 1*b* – 0.72*b*, to represent a percent increase and illustrate how the quantities are related. * **7.EE.3:** Students calculate with positive rational numbers and convert between percentages and decimals as they write and solve equations to solve problems involving sales tax, tips, minimum wage, percent error, and pollution. * **7.EE.4:** Students write and solve equations involving multi-step ratio and percent problems. * **7.G.1:** Students use scale factors to determine unknown values in proportional relationships involving sticker sizes, some of which involve fractional quantities. |  |  |  |
| **Unit 5:** Operations With Positive and Negative Numbers  *Apply and extend prior knowledge of the rational number system and absolute value to add, subtract, multiply, and divide rational numbers in a variety of contexts.* | * **Proportional Relationships:** Students apply proportional reasoning to solve problems involving positive and negative numbers in real-world contexts, such as turtle races and solar panels. * **Unit Rates in the World:** Students use unit rates to solve problems involving positive and negative numbers in real-world contexts, such as turtle races and Arctic sea ice.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.NS.1.a:** Beginning with the context of floats and anchors attached to submarines and extending to other real-world contexts, students describe how opposite quantities combine to make zero. * **7.NS.1.b:** Within the contexts of floats, anchors, and bumpers, students use absolute value and distance along number lines to understand what it means to add positive and negative rational numbers. * **7.NS.1.c:** Within the contexts of floats, anchors, and bumpers, students use additive inverses, absolute value, and distance along number lines to understand what it means to subtract positive and negative rational numbers. * **7.NS.1.d:** Students use additive inverses, the commutative property, and the associative property to add and subtract rational numbers. * **7.NS.2.a:** Students extend the floats and anchors context to make sense of multiplying signed numbers and connect the distributive property to understand why the product of two negative numbers is positive. * **7.NS.2.b:** Students use the context of turtle races to make sense of dividing signed numbers. * **7.NS.2.c:** Students apply the commutative and distributive properties when multiplying rational numbers. * **7.NS.3:** Students apply what they have learned to solve problems involving the four operations with rational numbers. * **7.RP.2:** Using a position-rate-time proportional relationship context involving turtle races, students make sense of multiplication and division of positive and negative numbers. * **7.EE.3:** Students solve problems — such as puzzles, and in contexts such as world temperatures, Arctic sea ice levels, and solar panels — that involve calculations with positive and negative rational numbers. |  |  |  |
| **Unit 6:** Expressions, Equations, and Inequalities  *Work with unit rates and variable quantities to represent and solve real-world problems involving equivalent expressions, multi-step equations, and multi-step inequalities.* | * **Unit Rates in the World:** Students recognize and apply the unit rate in problems involving proportional relationships. They explore variable quantities by connecting moves on hanger diagrams to solving equations using properties of equality. They use equations and inequalities to solve a variety of real-world problems and make sense of their solutions in context.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.EE.1:** Students use visual models to add, subtract, factor, and expand linear expressions, including those involving rational coefficients. * **7.EE.2:** Using the distributive property, students write expressions in the form *px* + *q* as *p*(*x* + *q*) and vice versa to illustrate how the quantities are related. * **7.EE.3:** Students represent and solve problems involving positive and negative rational numbers using expressions, equations, and inequalities. * **7.EE.4.a:** Students develop fluency in solving equations of the form *px* + *q* = *r* and  *p*(*x* + *q*) = *r*, as they write equations of these forms to represent and solve mathematical and real-world problems involving rational numbers. * **7.EE.4.b:** Students solve word problems involving inequalities of the form  *px* + *q* > *r* or *px* + *q* < *r*, graph the solution set on a number line, and interpret the solution within the context of the problem. * **7.RP.2:** Students reason about proportional relationships as they connect real-world contexts, tape diagrams, and equations. |  |  |  |
| **Unit 7:** Angles, Triangles, and Prisms  *Construct, describe, and measure two- dimensional and three-dimensional geometric figures and use relationships among them to solve real-world problems.* | * **2D and 3D Connections:** Students study the impact of given angle measures and segment measures as they create triangles given three measures of side lengths of angles. They move on to make connections between two-dimensional cross sections that can be created from three-dimensional figures. They calculate the surface area and volume of three-dimensional figures, including by using the scale of models that represent actual structures. In Task 2 of Investigation 1: *Interior Design Room*, students visualize their 3-D rooms as 2-D blueprints, calculate the surface area to determine the amount of paint needed, and participate in a Gallery Tour to communicate their results. This Investigation also addresses the Big Ideas **Scale Drawings** and **Shapes in the World**. * **Angle Relationships:** Students analyze pinwheels created by copying one part over and over again around a vertex to explore familiar angle measures. They move on to explore relationships between angles, such as complementary, supplementary, vertical, and adjacent angles. They use these relationships to write and solve equations to determine missing angle measures. Students study the impact on angle measures as they create triangles given three measures of side lengths of angles. * **Scale Drawings:** Students calculate the surface area of three-dimensional models that represent actual structures and then calculate the surface area of the actual structures using a given scale. * **Shapes in the World:** Students apply their understanding of angle relationships, area, surface area, and volume to solve real-world problems.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.G.1:** Students use scale factors to determine the surface area of actual structures given three-dimensional models. * **7.G.2:** Students construct polygons (with a focus on triangles) based on given side lengths or angle measures, recognizing the number of possible shapes that can be made from those conditions. * **7.G.3:** Students use dynamic geometry software to explore and describe two-dimensional cross sections of three-dimensional figures. * **7.G.5:** Students use angle relationships — including supplementary, complementary, vertical, and adjacent angles — to write and solve equations to determine missing angle measures. * **7.G.6:** Students solve mathematical problems involving area, surface area, and volume and apply their strategies to a real-world context involving containers of popcorn. * **7.NS.3:** Students calculate with rational numbers to solve problems involving angle relationships, area, surface area, and volume. * **7.EE.4:** Students write and solve equations involving angle relationships to determine unknown angle measures. |  |  |  |
| **Unit 8:** Probability and Sampling  *Draw inferences about one or more populations using random sampling and proportional reasoning. Explore concepts of probability and develop probability models to solve problems and make predictions.* | * **Populations & Samples:** Students study populations and samples and compare the sample means with the population mean to determine if the samples are representative. Students make inferences and critique claims made about the population by studying the sample. They use digital simulations to model repeated sampling, explaining how the sample selection process could be improved. In Task Investigation 2: *The California Spotted Owl*, students make sense of data and create and analyze data displays about the California Spotted Owl to understand more about why its population has been decreasing and what has been done to protect it. This Investigation also addresses the Big Ideas **Visualize Populations***,* **Proportional Relationships***,* and **Unit Rates in the World***.* * **Visualize Populations:** Students study two or more populations of data by visually comparing their distributions. They calculate measures of center and variability of samples to make inferences and predictions about the populations within the context of the data. * **Probability Models:** Students connect likelihood and sample space to determine the probability of an event. They make predictions by designing simulations to estimate the probability of compound events. They move on to express probabilities as fractions, decimals, and percentages and use data from repeated experiments and proportional reasoning to make predictions. Students use simulations to estimate the probability of compound events. * **Proportional Relationships:** Using data representing population samples from repeated experiments, students use proportional reasoning to make predictions and estimates about the population. * **Unit Rates in the World:** Using data representing population samples from repeated experiments, students write and solve equations to make predictions and estimates about the population.   For more information about how each Big Idea is developed throughout the grade, refer to the Keeping the Big Ideas at the Center ([pages xiv–xix](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=12)) in the Teacher Edition. | * **7.SP.1:** Students explore techniques for gathering samples, recognizing that random sampling typically produces data representative of the population. * **7.SP.2:** Students use sampling data to make inferences about populations. They use simulations to generate multiple samples of the same size and determine whether they have measures of center and variation that are alike or different. * **7.SP.3:** Students analyze two data distributions with similar variabilities. They come to recognize that when the centers of two data distributions are greater than 1 mean absolute deviation apart, the visual separation is more noticeable. * **7.SP.4:** Students calculate measures of center and measures of variability for data collected by random sampling methods and use those measures to make comparative inferences about two populations. * **7.SP.5:** Students develop beginning probability concepts and connect numbers between 0 and 1 as ways to describe the likelihood of events occurring. * **7.SP.6:** Students use repeated experiments and proportional reasoning to predict the contents of a mystery bag, recognizing that the number of repeated experiments affects the accuracy of their prediction. * **7.SP.7.a:** Students run experiments and calculate probabilities in which all of the outcomes are equally likely. * **7.SP.7.b:** Students run experiments and calculate probabilities using spinners, coins, and number cubes, in which not all of the outcomes are equally likely. * **7.SP.8.a:** Through the context of fair games, students connect their understanding of the probability of a simple event to the probability of a compound event. * **7.SP.8.b:** Students use organized lists, tables, and tree diagrams to represent sample spaces for compound events. * **7.SP.8.c:** Students design and run simulations that represent compound events relating to weather forecasts, blood types, and other contexts. * **7.RP.1:** Students understand probability as a ratio of the number of outcomes desired to the total number of outcomes in the sample space. * **7.RP.2.b:** To predict the contents of a mystery bag, students connect the unit rate (constant of proportionality) to probability experiments. * **7.RP.3:** Students use proportional reasoning to compare probabilities from a model to the results of repeated experiments. They use proportional reasoning to make predictions and estimates about a population from random samples. * **7.EE.3:** Students calculate and represent probabilities, including those that stem from multi-step calculations, using fractions, decimals, and percentages. They use percentages to make inferences about populations from random samples. |  |  |  |

Publishers/developers should be aware of how major conceptual ideas develop from one grade to the next. For charts detailing the progression of the *Mathematics Framework*’s Big Ideas throughout the grade levels, see [chapter 6](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.cde.ca.gov%2Fci%2Fma%2Fcf%2Fdocuments%2Fmathfwchapter6.docx&wdOrigin=BROWSELINK) (TK–grade 2 and grades 3–5) and [chapter 7](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.cde.ca.gov%2Fci%2Fma%2Fcf%2Fdocuments%2Fmathfwchapter7.docx&wdOrigin=BROWSELINK) (grades 6–8).

State-adopted instructional materials help teachers to present and students to learn the content set forth in the *California Common Core State Standards for Mathematics with California Additions,* which include boththe content standards and the standards for mathematical practice (SMPs). Publishers/developers should use the following tables to provide page number citations or other references that demonstrate alignment with the SMPs and content standards.

### Standards for Mathematical Practice

To view the full alignment of Amplify Desmos Math California to each of the Standards for Mathematical Practice, refer to [pages liv–lvii](https://learning.amplify.com/m/7cb7e1ea821a7db5/original/ADM-G7-TE-FM-V1-CA.pdf#page=52) in the Teacher Edition. Exemplar citations are provided in the following table.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| MP.1 | Make sense of problems and persevere in solving them. | **Student Edition**   * 4.04 ([Activity 1, Problems 2–7, pages 315–316](https://learning.amplify.com/m/21263bb2182b89fb/original/ADM-G7-U4-04-SE-lesson-answer-key-CA.pdf#page=2)) * 6.12 ([Activity 1, Problem 3, page 593](https://learning.amplify.com/m/3ab51defdee1fe5c/original/ADM-G7-U6-12-SE-lesson-answer-key-CA.pdf#page=2)) * 5.07 ([Activity 1, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3a685d3e-8080-4a40-b8fe-9242d8972ddb)) * 5.11 ([Activity 2, Screens 6–7](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/dfd54cb9-69e9-4d1f-9cd0-ae74c40eb4e8)) * Unit 2 ([Practice Day 2, Task Cards: Task A, Problem 2](https://learning.amplify.com/m/6706b356bdfacba1/original/ADM-G7-U2-practice-day-2-sheet-CA.pdf)) * Unit 3 ([Practice Day 2, Activity Cards](https://learning.amplify.com/m/593961b47bc49f55/original/ADM-G-U-practice-day-2-sheet-CA.pdf))   **Teacher Edition**   * 6.12 ([Activity 1, entire Launch and Monitor sections, page 593](https://learning.amplify.com/m/207e251878bc05a5/original/ADM-G7-U6-12-TE-CA.pdf#page=4) and [Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0c478?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/616521f5-7b59-4e38-90c0-f34632b99b6f)) * 4.04 ([Activity 1, entire Launch section, page 315](https://learning.amplify.com/m/6ce3ca07f91eca10/original/ADM-G7-U4-04-TE-CA.pdf#page=4)) * 5.11 ([Activity 2, entire Launch section, page 483](https://learning.amplify.com/m/64c6e17843646cba/original/ADM-G7-U5-11-TE-CA.pdf#page=5)) * 5.07 ([Activity 1, entire Monitor section, page 452](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=5)) |  |  |  |
| MP.2 | Reason abstractly and quantitatively. | **Student Edition**   * 6.04 ([Activity 1, Problems 3–6, page 536](https://learning.amplify.com/m/376156feaeb3cccd/original/ADM-G7-U6-04-SE-lesson-answer-key-CA.pdf#page=2)) * 6.13 ([Activities 2–3, Screens 4–7](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0cfa9?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/de0a6a55-dcd9-473d-8b0a-47ac2a28fd66)) * Unit 6 Explore ([Activity, Problems 4–5, page 510](https://learning.amplify.com/m/6e25879cc664aadf/original/ADM-G7-U6-Explore-SE-lesson-answer-key-CA.pdf#page=2)) * 6.03 ([Activity 1, Screens 3–5](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d087e8?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/9efb3613-ed2c-41d4-9e80-d26f00c09909))   **Teacher Edition**   * 6.04 ([Activity 1, entire Launch section, page 536](https://learning.amplify.com/m/364de36f40c3e9c/original/ADM-G7-U6-04-TE-CA.pdf#page=4) and [Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d08e4f?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/75b206f3-2ba2-422a-b388-5956e00a83ec)) * Unit 6 Explore ([Activity, entire Launch section, page 510](https://learning.amplify.com/m/3feb6a94dc5a6eff/original/ADM-G7-U6-Explore-TE-CA.pdf#page=4) and [Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d072f1?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/5e6c8477-61cf-44da-a86f-6dccfa7e21af)) * Unit 6 Explore ([Activity, Monitor, Problem 5 Differentiation and Connect, paragraph that begins with “Invite students” and MLR7: Compare and Connect, pages 510–511](https://learning.amplify.com/m/3feb6a94dc5a6eff/original/ADM-G7-U6-Explore-TE-CA.pdf#page=4)) * 6.03 ([Activity 1, entire Monitor section, pages 528–529](https://learning.amplify.com/m/130b79eef6b189c1/original/ADM-G7-U6-03-TE-CA.pdf#page=4)) |  |  |  |
| MP.3 | Construct viable arguments and critique the reasoning of others. | **Student Edition**   * 7.05 ([Activity 2, Screen 5 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1bff4?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/2064f723-53f9-48fe-92a7-fd86835f4d6d)) * 7.07 ([Warm-Up and Activity 1, Screens 1–2](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1d78d?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/34981a36-e1cf-4dfc-a351-d601e16f7797)) * 5.09 ([Activity 2, Problems 6–7, page 467](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=3)) * 1.03 ([Activity 2, Screen 8 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c57907aef8d98cba9d1?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c56907aef8d98cb7a75#preview/7d8bd9fd-b8a2-4764-a875-aeb072169f74)) * 6.02 ([Activity 2, Screens 8–9 and click on the Sample Responses tabs](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d07fef?collections=67fd335d907aef8d98f2f10c%2C68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/a9e356d0-dcea-4541-a837-43e03f470af5))   **Teacher Edition**   * 7.05 ([Activity 2, entire Launch section, page 681](https://learning.amplify.com/m/1c98d75073479f2/original/ADM-G7-U7-05-TE-CA.pdf#page=5)) * 1.03 ([Activity 2, entire Connect section, page 28](https://learning.amplify.com/m/112eda56c96ae6e1/original/ADM-G7-U1-03-TE-CA.pdf#page=6)) * 6.02 ([Activity 2, entire Monitor section, page 523](https://learning.amplify.com/m/5068815ddf22eed7/original/ADM-G7-U6-02-TE-CA.pdf3#page=6)) |  |  |  |
| MP.4 | Model with mathematics. | **Student Edition**   * 8.08 ([Activity 1, Problems 2–3](https://learning.amplify.com/m/29a78234eba286a0/original/ADM-G7-U8-08-SE-lesson-answer-key-CA.pdf#page=2), page 817, [Activity 1 Sheet](https://learning.amplify.com/m/7d360fa77ee82f0b/original/ADM-G7-U8-08-sheet-CA.pdf), and [Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe)) * 7.13 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d21186?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/b99f912b-8ac1-4ed9-876a-c52bfa8258e9)) * 5.13 ([Activity 2, Problems 9–11, page 497](https://learning.amplify.com/m/26553a1affeb5720/original/ADM-G7-U5-13-SE-lesson-answer-key-CA.pdf#page=4) and [Activity 2 Sheet](https://learning.amplify.com/m/7b0a41c7f95ad716/original/ADM-G7-U5-13-sheet-CA.pdf)) * 2.12 ([Activity 2, Problems 5–6, page 187](https://learning.amplify.com/m/79dfa90795513cae/original/ADM-G7-U2-12-SE-lesson-answer-key-CA.pdf#page=3))   **Teacher Edition**   * 8.08 ([Activity 1, entire Monitor and Connect sections, page 817](https://learning.amplify.com/m/67c49101689ae70e/original/ADM-G7-U8-08-TE-CA.pdf#page=4)) * 7.13 ([Activity 1, entire Monitor and Connect sections, page 744](https://learning.amplify.com/m/72c3bda564159a7d/original/ADM-G7-U7-13-TE-CA.pdf#page=4)) * 2.12 ([Activity 2, entire Launch, Monitor, and Connect sections, page 187](https://learning.amplify.com/m/57b8f46dc4a86e6f/original/ADM-G7-U2-12-TE-CA.pdf#page=5)) |  |  |  |
| MP.5 | Use appropriate tools strategically. | **Student Edition**   * 8.02 ([Activity 3, Screen 8](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/9c77c671-d591-4ab7-ab22-f1d79649e41a)) * 8.06 ([Activity 2, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/55e76758-b312-41ee-9cea-5467aa77680b)) * Unit 3 Explore ([Activity, Problems 2–5, pages 206–207](https://learning.amplify.com/m/42cc7e71ed0933ee/original/ADM-G7-U3-Explore-SE-lesson-answer-key-CA.pdf#page=2)) * 4.10 ([Activities 1–2, Screen 3, Enter a response to the prompt and click “Share With Class” to view Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ceee98?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/160f3d41-3651-4179-8782-21590b4b4592), and [Student Edition, pages 363–364](https://learning.amplify.com/m/767225dd4074b106/original/ADM-G7-U4-10-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 8.02 ([Activity 3, entire Monitor section, page 771](https://learning.amplify.com/m/7b07e6966bacd968/original/ADM-G7-U8-02-TE-CA.pdf#page=7)) * 8.06 ([Activity 2, Monitor, paragraph that begins with “Look for”, and entire Connect, including the Key Takeaway, page 804](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=7)) * 4.10 ([Activity 2, Monitor, paragraph that begins with “Look for”, and Differentiation, page 365](https://learning.amplify.com/m/254c8deb8f33433e/original/ADM-G7-U4-10-TE-CA.pdf#page=6))   **Intervention, Extension, and Investigation Resources**   * Investigation 2 ([The California Spotted Owl, student pages 277–278](https://learning.amplify.com/m/68e3f434b793f61d/original/ADM-G7-Investigation-2-student-CA.pdf#page=3), and [Data Sheets, pages 280–281](https://learning.amplify.com/m/68e3f434b793f61d/original/ADM-G7-Investigation-2-student-CA.pdf#page=6)) |  |  |  |
| MP.6 | Attend to precision. | **Student Edition**   * 2.11 ([Activity 1, Problem 2, page 180](https://learning.amplify.com/m/23cfd09c0805778e/original/ADM-G7-U2-11-SE-lesson-answer-key-CA.pdf#page=2)) * 3.02 ([Activity 2, Screen 8 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdc1f0?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/434bc489-aca1-4b8c-ae06-a1c9ae6cf0c2)) * 6.09 ([Activity 2, Screens 8–9](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0b00d?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/3000af31-45b1-44cf-a775-d4312d587bf7)) * 7.08 ([Activity 2, Problems 6–10, pages 706–707](https://learning.amplify.com/m/295cc3d3164b3610/original/ADM-G7-U7-08-SE-lesson-answer-key-CA.pdf#page=4))   **Teacher Edition**   * 2.11 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 180](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=4)) * 6.09 ([Activity 2, entire Launch section, and Monitor, paragraph that begins with “Listen for”, page 573](https://learning.amplify.com/m/54ad97d86feed3d3/original/ADM-G7-U6-09-TE-CA.pdf#page=6)) * 7.08 ([Activity 2, entire Connect section, page 707](https://learning.amplify.com/m/e6839cbe13b2b62/original/ADM-G7-U7-08-TE-CA.pdf#page=7)) |  |  |  |
| MP.7 | Look for and make use of structure. | **Student Edition**   * Unit 2 Explore ([Activity, Problems 2–3, page 100](https://learning.amplify.com/m/7b29f610a7368ff6/original/ADM-G7-U2-Explore-SE-lesson-answer-key-CA.pdf#page=2)) * 2.07 ([Activity 1, Screen 3 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/ef97cb66-0ddf-4aa5-b946-2d55ec7d8559)) * 6.07 ([Activity 2](https://learning.amplify.com/m/5d69cade07a07415/original/ADM-G7-U6-07-SE-lesson-answer-key-CA.pdf#page=3) and [Synthesis](https://learning.amplify.com/m/62ea90a45ed48812/original/ADM-G7-U6-07-SE-practice-answer-key-CA.pdf), Problems 6–9, pages 559–560) * 7.02 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c6c907aef8d98d1a1a1?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/e800098d-6dc4-441f-9451-21032d388cff) and [Student Edition, page 657](https://learning.amplify.com/m/258cf0ec5116ec74/original/ADM-G7-U7-02-SE-lesson-answer-key-CA.pdf#page=2)) * 7.11 ([Activity 1, Screens 3–4 and click on the Sample Responses tabs](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d2018d?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/11793a63-82c7-4f61-b6b8-b1ab66f3967e))   **Teacher Edition**   * 2.07 ([Activity 1, Monitor, paragraph that begins with “Capture” and entire Connect section, including the Key Takeaway, page 147](https://learning.amplify.com/m/747e5d506b668fa/original/ADM-G7-U2-07-TE-CA.pdf#page=5)) * 6.07 ([Activity 2, entire Connect section, including the Key Takeaway, page 559](https://learning.amplify.com/m/6d36e78c93f57eeb/original/ADM-G7-U6-07-TE-CA.pdf#page=5)) * 7.02 ([Activity 1, entire Connect section, including the Key Takeaway, page 657](https://learning.amplify.com/m/e289001ba679207/original/ADM-G7-U7-02-TE-CA.pdf#page=4)) |  |  |  |
| MP.8 | Look for and express regularity in repeated reasoning. | **Student Edition**   * 2.04 ([Activity 1, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/f39982e0-fb2d-4323-a087-08f98f8c0622)) * 3.01 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdb917?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/b816ed87-2b2b-44fd-bd8b-89179d3a54e5)) * 4.13 ([Activities 2–3, Problems 10–11, pages 387–388](https://learning.amplify.com/m/36a485a8d6b129dc/original/ADM-G7-U4-13-SE-lesson-answer-key-CA.pdf#page=3)) * 4.09 ([Activity 2, Screens 8–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cee775?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/a58f1978-a54b-4bdf-96e6-b8990eae42a6))   **Teacher Edition**   * 2.04 ([Activity 1, Monitor, Differentiation, and entire Connect section, page 126](https://learning.amplify.com/m/2517e9185ae3779a/original/ADM-G7-U2-04-TE-CA.pdf#page=4)) * 3.01 ([Activity 1, entire Monitor, section, page 210](https://learning.amplify.com/m/5916eea79f0388ec/original/ADM-G7-U3-01-TE-CA.pdf#page=4)) * 4.13 ([Activity 3, Monitor, paragraph that begins with “Look for” and Connect, paragraph that begins with “Consider asking”, page 388](https://learning.amplify.com/m/57bc91ebd0b08dda/original/ADM-G7-U4-13-TE-CA.pdf#page=6)) * 4.09 ([Activity 2, Screen 9, Monitor, Differentiation, and entire Connect section, pages 357–358](https://learning.amplify.com/m/6b83b5400b661d79/original/ADM-G7-U4-09-TE-CA.pdf#page=6)) |  |  |  |

### Grade-level Content Standards

### Domain: Ratios and Proportional Relationships

##### Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in Units 1, 2, 3, 4, 5, 6, and 8.

* In **Unit 1**, students use early proportional reasoning to explore relationships among scaled geometric figures and scale drawings. They understand that scaled copies have proportional side lengths. Students understand the scale factor as a ratio of new to original lengths, which represents a unit rate. Through contexts of tiles, state shapes, and team logos, students connect the idea of a scale factor to a unit rate and calculate with scale factors. They reason about proportional relationships as they explore how scale factors are related to scale drawings.
* In **Unit 2**, through the context of recipes, students calculate unit rates (as the constant of proportionality), including those involving ratios of fractions. They use tables of equivalent ratios and graphs to determine whether two quantities are in a proportional relationship. Students identify the constant of proportionality, recognizing it as the unit rate in multiple representations of proportional relationships. Using real-world contexts — including robot design, travel times, recipes, and turtle races — students represent proportional relationships with equations of the form *y* = *kx*, where *k* is the constant of proportionality. Using graphs of proportional relationships related to gas mileage of various vehicles, students interpret points on the graph within context and understand what the points (0, 0) and (1, *r*) represent, where *r* is the unit rate.
* In **Unit 3**, through dynamic geometry software and measurement calculations, students use graphs to observe that the circumference of a circle is proportional to its diameter, but that the area of the circle is not proportional to its diameter or radius. As they explore the proportional relationship between the circumference of a circle and its diameter, they understand and identify *π* as the constant of proportionality (unit rate).
* In **Unit 4**, students calculate unit rates, including those involving ratios of fractions, to solve problems involving sticker sizes and recipes. They represent proportional relationships with equations, such as percent error, in the context of building a bookcase. Students apply proportional reasoning to solve real-world, multi-step problems involving percentages, such as percent increase and percent decrease, using contexts such as measurement, sales tax, and tips.
* In **Unit 5**, using a position-rate-time proportional relationship context involving turtle races, students make sense of multiplication and division of positive and negative numbers.
* In **Unit 6**, students reason about proportional relationships as they connect real-world contexts, tape diagrams, and equations.
* In **Unit 8**, students understand probability as a ratio of the number of outcomes desired to the total number of outcomes in the sample space. To predict the contents of a mystery bag, they connect the unit rate (constant of proportionality) to probability experiments. Students use proportional reasoning to compare probabilities from a model to the results of repeated experiments. They use proportional reasoning to make predictions and estimates about a population from random samples.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.RP.1 | Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units*.* | *Compute unit rates associated with ratios of fractions.*  **Student Edition**   * 4.12 ([Activity 1, Problems 5 and 7, page 380](https://learning.amplify.com/m/280f5f9188192a23/original/ADM-G7-U4-12-SE-lesson-answer-key-CA.pdf#page=2)) * 4.12 ([Activity 2, Problems 8–10, page 381](https://learning.amplify.com/m/280f5f9188192a23/original/ADM-G7-U4-12-SE-lesson-answer-key-CA.pdf#page=3)) * 4.11 ([Practice, Screens 4–5, Problems 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c64907aef8d98cf4466?collections=68078c61907aef8d98ce9c6b%2C68078c63907aef8d98cf14df#preview/f4d65ecf-299c-4313-8789-0f2f02974fbe))   **Teacher Edition**   * 4.12 ([Activity 2, entire Connect section, page 381](https://learning.amplify.com/m/18de761a73d117f8/original/ADM-G7-U4-12-TE-CA.pdf#page=5)) * 4.12 ([Synthesis, paragraph beginning with “Have students share”, page 382](https://learning.amplify.com/m/18de761a73d117f8/original/ADM-G7-U4-12-TE-CA.pdf#page=6))   *Compute unit rates associated with ratios of fractions, including ratios of lengths.*  **Student Edition**   * 4.11 ([Warm-Up and Activity 1, Screens 2–6](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c61907aef8d98ce9c6b#preview/864da77a-0c84-4fe1-b676-99d3fa27263d)) * 4.11 ([Show What You Know, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c61907aef8d98ce9c6b#preview/c9d76657-23be-4de6-9806-98851865fe5a))   **Teacher Edition**   * 4.11 ([Activity 2, Monitor, Differentiation, page 374](https://learning.amplify.com/m/78819335dfcd6d16/original/ADM-G7-U4-11-TE-CA.pdf#page=6))   **Intervention, Extension, and Investigation Resources**   * Investigation 1 ([Interior Design Room, Problem 3, student page 261](https://learning.amplify.com/m/7416ba16fffc07c3/original/ADM-G7-Investigation-1-student-answers-CA.pdf#page=2), and [Information Sheet, page 265](https://learning.amplify.com/m/7416ba16fffc07c3/original/ADM-G7-Investigation-1-student-answers-CA.pdf#page=6))   *Compute unit rates associated with ratios of fractions, including ratios of areas.*  **Student Edition**   * 1.05 ([Activity 2, Screen 7 and click on the tab for Malik’s strategy](https://teacher.desmos.com/activitybuilder/custom/68078c57907aef8d98cbbaf8?collections=68078c56907aef8d98cb768d%2C68078c56907aef8d98cb7a75#preview/0ee1589e-256c-422a-9701-3845f38fd125)) * 1.05 ([Practice, Screen 8, Problem 8](https://teacher.desmos.com/activitybuilder/custom/68078c59907aef8d98cc3e45?collections=68078c56907aef8d98cb7a75%2C68078c58907aef8d98cc2044#preview/7fe9c585-f57e-43fe-a191-7ed424f1e983))   **Teacher Edition**   * 1.05 ([Activity 2, Monitor, paragraph that begins with “Share”, page 43](https://learning.amplify.com/m/a20f1186bc62746/original/ADM-G7-U1-05-TE-CA.pdf#page=6))   *Compute unit rates associated with ratios of fractions, including ratios of other quantities measured in like or different units.*  **Student Edition**   * 2.03 ([Activity 1, Problems 3–6, page 119](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 2.03 ([Activity 1, entire Monitor section, page 119](https://learning.amplify.com/m/7461d4eb232869f5/original/ADM-G7-U2-03-TE-CA.pdf#page=4)) |  |  |  |
| 7.RP.2a | Recognize and represent proportional relationships between quantities. Decide whether two quantities are in a proportional relationship. | *Recognize and represent proportional relationships between quantities.*  **Student Edition**   * 2.02 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5a907aef8d98ccb80b?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/616c6f34-6ef0-49d7-bcea-0f4dc39b7c2c)) * 2.03 [(Activity 2, Problems 7–10, page 120](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=3)) * 2.07 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/eac61b8a-cbdc-4670-8fc1-a1fa18cd9fd8) and [Student Edition, pages 146–147](https://learning.amplify.com/m/dd9616976b4f40e/original/ADM-G7-U2-07-SE-lesson-answer-key-CA.pdf#page=2)) * 2.11 ([Activities 1–2, Problems 2–3, pages 180–181](https://learning.amplify.com/m/23cfd09c0805778e/original/ADM-G7-U2-11-SE-lesson-answer-key-CA.pdf#page=2)) * 4.11 ([Activity 2, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/ddc5c947-d32a-4862-ae58-3084e783d3ed))   **Teacher Edition**   * 2.11 ([Activity 2, entire Connect section, including the Key Takeaway, page 181](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=5))   *Decide whether two quantities are in a proportional relationship.*  **Student Edition**   * 3.01 ([Activity 1, Screen 4 and click on the Side Length vs. Interior tab](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdb917?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/fd606549-4a72-4229-9dc4-c1b9cbc14fef)) * 3.01 ([Activity 2, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdb917?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/23785abe-c5fc-44ec-9092-682cc86ee659)) * 2.02 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c5a907aef8d98ccb80b?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/82fdb1fb-0da5-4b41-be37-a0cdc08ca7ce)) * 2.08 ([Activities 2–3, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccfb24?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/4ed6a7a1-a231-4c5f-b1a0-43657b709e27)) * 2.07 ([Activities 1–2, Screens 3–5](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/ef97cb66-0ddf-4aa5-b946-2d55ec7d8559))   **Teacher Edition**   * 3.01 ([Activity 1, Monitor, Differentiation, page 211](https://learning.amplify.com/m/5916eea79f0388ec/original/ADM-G7-U3-01-TE-CA.pdf#page=5)) * 2.02 ([Activity 1, entire Launch section, page 111](https://learning.amplify.com/m/5b7e794759241a88/original/ADM-G7-U2-02-TE-CA.pdf#page=4)) |  |  |  |
| 7.RP.2b | Recognize and represent proportional relationships between quantities. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. | *Recognize and represent proportional relationships between quantities.*  **Student Edition**   * 2.02 ([Activity 2, Screen 7)](https://teacher.desmos.com/activitybuilder/custom/68078c5a907aef8d98ccb80b?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/616c6f34-6ef0-49d7-bcea-0f4dc39b7c2c) * 2.03 [(Activity 2, Problems 7–10, page 120](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=3)) * 2.07 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/eac61b8a-cbdc-4670-8fc1-a1fa18cd9fd8) and [Student Edition, pages 146–147](https://learning.amplify.com/m/dd9616976b4f40e/original/ADM-G7-U2-07-SE-lesson-answer-key-CA.pdf#page=2)) * 2.11 ([Activities 1–2, Problems 2–3, pages 180–181](https://learning.amplify.com/m/23cfd09c0805778e/original/ADM-G7-U2-11-SE-lesson-answer-key-CA.pdf#page=2)) * 4.11 ([Activity 2, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/ddc5c947-d32a-4862-ae58-3084e783d3ed))   **Teacher Edition**   * 2.11 ([Activity 2, entire Connect section, including the Key Takeaway, page 181](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=5))   *Identify the constant of proportionality (unit rate) in tables of proportional relationships.*  **Student Edition**   * 2.03 ([Activity 2, Problems 8 and 10, page 120](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=3)) * 2.10 ([Activity 1, Screen 2, and Play the animation](https://teacher.desmos.com/activitybuilder/custom/68078c5c907aef8d98cd11c4?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/f73de18d-b91b-4f5f-aef0-450de266d7e1))   **Teacher Edition**   * 2.03 ([Activity 2, Monitor, Differentiation, and entire Connect section, page 120](https://learning.amplify.com/m/7461d4eb232869f5/original/ADM-G7-U2-03-TE-CA.pdf#page=5))   *Identify the constant of proportionality (unit rate) in graphs of proportional relationships.*  **Student Edition**   * 2.09 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/57f0be7b-ef5b-46cf-9f7e-9ffe979c9e28)) * 2.09 ([Synthesis, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/cf158889-0a2b-4214-86ed-a63f73e5aa73)) * 2.09 ([Show What You Know, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/ec1ed6f5-1c42-4d00-ae64-2a3f8f4cee36))   **Teacher Edition**   * 2.09 ([Activity 2, Monitor, paragraph that begins with “Look for”, page 166](https://learning.amplify.com/m/24587c4ac8f6ca70/original/ADM-G7-U2-09-TE-CA.pdf#page=6)) * 2.09 ([Activity 2, entire Connect section, page 166](https://learning.amplify.com/m/24587c4ac8f6ca70/original/ADM-G7-U2-09-TE-CA.pdf#page=6))   *Identify the constant of proportionality (unit rate) in equations of proportional relationships.*  **Student Edition**   * 2.05 ([Activity 2, Screen 5](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/d09b749f-8963-4fdc-afc7-eace15d2e550)) * Unit 2 ([Practice Day 2, Task Cards: Task B](https://learning.amplify.com/m/6706b356bdfacba1/original/ADM-G7-U2-practice-day-2-sheet-CA.pdf#page=2))   *Identify the constant of proportionality (unit rate) in verbal descriptions of proportional relationships.*  **Student Edition**   * 2.05 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/b1780af2-5e9f-4090-8af5-f1b843e60db0)) * 2.05 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/db8ec1d0-64c5-4cdb-ab90-bf3bb0cf253f)) * 2.09 ([Activity 2, Screen 5](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/e638515b-3cc3-4f2d-b696-05d117411159)) * Unit 2 ([Practice Day 2, Task Cards: Task B, Problem 1](https://learning.amplify.com/m/6706b356bdfacba1/original/ADM-G7-U2-practice-day-2-sheet-CA.pdf#page=2))   **Teacher Edition**   * 2.05 ([Activity 1, entire Launch section, page 132](https://learning.amplify.com/m/470426ffa863ace4/original/ADM-G7-U2-05-TE-CA.pdf#page=4))   *Identify the constant of proportionality (unit rate) in diagrams of proportional relationships.*  **Student Edition**   * 2.05 (Activity 3, [Screen 8: click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/7f3a5405-5d9c-400c-9cd6-204d2cfd591c), and [Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/c548e870-b90c-4c78-991e-633a3627f89c))   **Teacher Edition**   * 2.05 ([Activity 3, Monitor, paragraph that begins with “Encourage students” and Differentiation, page 134](https://learning.amplify.com/m/470426ffa863ace4/original/ADM-G7-U2-05-TE-CA.pdf#page=6))   *Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.*  **Student Edition**   * 2.10 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c5c907aef8d98cd11c4?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/3b03f264-459a-42d0-8801-9f0563a500fd)) * 2.10 ([Activity 3, Screen 6](https://teacher.desmos.com/activitybuilder/custom/68078c5c907aef8d98cd11c4?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/90d2e971-7130-41a8-b497-207aed02b29e)) * 2.11 ([Synthesis, Problem 4, page 182](https://learning.amplify.com/m/504ccefc297f9a28/original/ADM-G7-U2-11-SE-practice-CA.pdf)) * 2.11 ([entire Summary section, page 182](https://learning.amplify.com/m/1ad36f850d40b82e/original/ADM-G7-U2-11-SE-practice-answer-key-CA.pdf)) * 2.11 ([Practice, Screens 1–4, Problems 1–4](https://teacher.desmos.com/activitybuilder/custom/68078c5d907aef8d98cd6fc9?collections=68078c5a907aef8d98cc9fbe%2C68078c5c907aef8d98cd4463#preview/44f5fcd8-6fd0-4e40-8e0d-495e8bb7260c))   **Teacher Edition**   * 2.11 ([entire Synthesis section and Lesson Takeaway, page 182](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=6)) |  |  |  |
| 7.RP.2c | Recognize and represent proportional relationships between quantities. Represent proportional relationships by equations. | *Recognize and represent proportional relationships between quantities.*  **Student Edition**   * 2.02 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5a907aef8d98ccb80b?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/616c6f34-6ef0-49d7-bcea-0f4dc39b7c2c)) * 2.03 ([Activity 2, Problems 7–10, page 120](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=3)) * 2.07 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/eac61b8a-cbdc-4670-8fc1-a1fa18cd9fd8) and [Student Edition, pages 146–147](https://learning.amplify.com/m/dd9616976b4f40e/original/ADM-G7-U2-07-SE-lesson-answer-key-CA.pdf#page=2)) * 2.11 ([Activities 1–2, Problems 2–3, pages 180–181](https://learning.amplify.com/m/23cfd09c0805778e/original/ADM-G7-U2-11-SE-lesson-answer-key-CA.pdf#page=2)) * 4.11 ([Activity 2, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/ddc5c947-d32a-4862-ae58-3084e783d3ed))   **Teacher Edition**   * 2.11 ([Activity 2, entire Connect section, including the Key Takeaway, page 181](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=5))   *Represent proportional relationships by equations.*  **Student Edition**   * 2.04 ([Activity 1, Screen 6](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c5a907aef8d98cc9fbe#preview/561f20bc-a5a4-47e4-8690-5883663d8790)) * 2.04 ([Activity 2, Screens 9 and 11](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c5a907aef8d98cc9fbe#preview/ab038694-4fd4-4f8e-b96d-e121428c8979)) * 2.04 ([Show What You Know, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c5a907aef8d98cc9fbe#preview/50686421-f297-4655-ab0b-7975db8b7d37)) * 2.05 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c5a907aef8d98cc9fbe#preview/b1780af2-5e9f-4090-8af5-f1b843e60db0)) * 2.05 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98ccdba9?collections=68078c5a907aef8d98cc9fbe#preview/db8ec1d0-64c5-4cdb-ab90-bf3bb0cf253f)) * 2.10 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c5c907aef8d98cd11c4?collections=68078c5a907aef8d98cc9fbe#preview/3b03f264-459a-42d0-8801-9f0563a500fd))   **Teacher Edition**   * 2.04 ([Activity 2, entire Connect section, page 127](https://learning.amplify.com/m/2517e9185ae3779a/original/ADM-G7-U2-04-TE-CA.pdf#page=5)) * 2.04 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 128](https://learning.amplify.com/m/2517e9185ae3779a/original/ADM-G7-U2-04-TE-CA.pdf#page=6)) * 2.05 ([Activity 2, Monitor, Differentiation, page 133](https://learning.amplify.com/m/470426ffa863ace4/original/ADM-G7-U2-05-TE-CA.pdf#page=5)) |  |  |  |
| 7.RP.2d | Recognize and represent proportional relationships between quantities. Explain what a point *(x, y)* on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r*) where *r* is the unit rate. | *Recognize and represent proportional relationships between quantities.*  **Student Edition**   * 2.02 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c5a907aef8d98ccb80b?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/616c6f34-6ef0-49d7-bcea-0f4dc39b7c2c)) * 2.03 ([Activity 2, Problems 7–10, page 120](https://learning.amplify.com/m/5f31473a71ca2110/original/ADM-G7-U2-03-SE-lesson-answer-key-CA.pdf#page=3)) * 2.07 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cce988?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/eac61b8a-cbdc-4670-8fc1-a1fa18cd9fd8) and [Student Edition, pages 146–147](https://learning.amplify.com/m/dd9616976b4f40e/original/ADM-G7-U2-07-SE-lesson-answer-key-CA.pdf#page=2)) * 2.11 ([Activities 1–2, Problems 2–3, pages 180–181](https://learning.amplify.com/m/23cfd09c0805778e/original/ADM-G7-U2-11-SE-lesson-answer-key-CA.pdf#page=2)) * 4.11 ([Activity 2, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cef3a0?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/ddc5c947-d32a-4862-ae58-3084e783d3ed))   **Teacher Edition**   * 2.11 ([Activity 2, entire Connect section, including the Key Takeaway, page 181](https://learning.amplify.com/m/12921cbd23b20366/original/ADM-G7-U2-11-TE-CA.pdf#page=5))   *Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation.*  **Student Edition**   * 2.09 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c5a907aef8d98cc9fbe#preview/bc5bcaf5-1b29-41fa-8257-4f9c0492ecd8)) * Unit 2 ([Practice Day 2, Task Cards: Task C](https://learning.amplify.com/m/6706b356bdfacba1/original/ADM-G7-U2-practice-day-2-sheet-CA.pdf#page=3))   **Teacher Edition**   * 2.09 ([Activity 1, Monitor, Differentiation, page 164](https://learning.amplify.com/m/24587c4ac8f6ca70/original/ADM-G7-U2-09-TE-CA.pdf#page=4))   *Explain what a point (x, y) on the graph of a proportional relationship means, with special attention to the points (0, 0) and (1, r) where r is the unit rate.*  **Student Edition**   * 2.09 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c5a907aef8d98cc9fbe#preview/bc5bcaf5-1b29-41fa-8257-4f9c0492ecd8)) * 2.09 ([Activity 2, Screen 6](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c5a907aef8d98cc9fbe#preview/8d54e7c7-5481-49cb-8888-76a3013b5cf9)) * 2.09 ([Show What You Know, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cd0785?collections=68078c5a907aef8d98cc9fbe#preview/ec1ed6f5-1c42-4d00-ae64-2a3f8f4cee36)) * 2.09 ([Practice, Screens 1, 3, and 5, Problems 1, 3, and 5](https://teacher.desmos.com/activitybuilder/custom/68078c5d907aef8d98cd66f4?collections=68078c5a907aef8d98cc9fbe%2C68078c5c907aef8d98cd4463#preview/d4c4067f-d7ae-4ebf-819d-2c8df0c58cb0))   **Teacher Edition**   * 2.09 ([Activity 2, Monitor, Differentiation, page 165](https://learning.amplify.com/m/24587c4ac8f6ca70/original/ADM-G7-U2-09-TE-CA.pdf#page=5)) * 2.09 ([Activity 2, Monitor, paragraph that begins with “Look for”, page 166](https://learning.amplify.com/m/24587c4ac8f6ca70/original/ADM-G7-U2-09-TE-CA.pdf#page=6)) |  |  |  |
| 7.RP.3 | Use proportional relationships to solve multistep ratio and percent problems. | *Use proportional relationships to solve multistep ratio problems.*  **Student Edition**   * 1.07 ([Activity 1, Problems 3–5, page 59](https://learning.amplify.com/m/1589b3a7ccf33b77/original/ADM-G7-U1-07-SE-lesson-answer-key-CA.pdf#page=3)) * 8.05 ([Activity 2, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/f04b08b6-695d-445d-9f59-a8dd5f875517)) * 8.12 ([Activity 1, Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d3029b?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/09498f0b-3852-4bad-87c0-a4358143fe50)) * 8.12 ([Activity 2, Screen 8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d3029b?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/9d884227-a1e0-4f5b-b707-acc208f0101d))   **Teacher Edition**   * 8.05 ([Activity 2, Connect, Screen 9, page 796](https://learning.amplify.com/m/7db71a2eeb72b654/original/ADM-G7-U8-05-TE-CA.pdf#page=7)) * 8.12 ([Activity 2, entire Connect section, including the Key Takeaway, page 850](https://learning.amplify.com/m/182765651be620c7/original/ADM-G7-U8-12-TE-CA.pdf#page=6))   *Use proportional relationships to solve multistep percent problems.*  **Student Edition**   * 4.07 ([Activity 2, Screens 6–7](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ced9be?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/5e3e3a19-456e-474e-aa62-421c357276a5)) * 4.07 ([Synthesis and Show What You Know, Screens 10–11](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ced9be?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/7ff8d649-406b-4256-b465-fafa40d9f4b6)) * 4.05 ([Activity 2, Screen 8](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cec47a?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/85aaa6fc-0ebc-42b0-a27b-247695bb32ae)) * 4.08 ([Activity 1, Problems 2–3, page 348](https://learning.amplify.com/m/11b30d42e632dcf2/original/ADM-G7-U4-08-SE-lesson-answer-key-CA.pdf#page=2)) * 4.04 ([Activity 1, Problems 2–7, pages 315–316](https://learning.amplify.com/m/21263bb2182b89fb/original/ADM-G7-U4-04-SE-lesson-answer-key-CA.pdf#page=2)) * 4.09 ([Activities 1–2, Screens 6–9](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98cee775?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/fa6b3c06-61ef-4bf9-b4d8-b01050866aec))   **Teacher Edition**   * 4.04 ([Activity 1, Monitor, bulleted list that begins with “Look for”, page 316](https://learning.amplify.com/m/6ce3ca07f91eca10/original/ADM-G7-U4-04-TE-CA.pdf#page=5)) * 4.07 ([Activity 2, entire Monitor section for Screen 7 and entire Connect section, page 342](https://learning.amplify.com/m/79dd25f1d4cbe0e6/original/ADM-G7-U4-07-TE-CA.pdf#page=6)) * 4.08 ([Activity 1, entire Monitor section, pages 348–349](https://learning.amplify.com/m/6ef24c6febdf6d17/original/ADM-G7-U4-08-TE-CA.pdf#page=4)) |  |  |  |

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### Domain: The Number System

##### Cluster: Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in Units 4, 5, and 7.

* In **Unit 4**, students convert fractions to decimals using long division, and reason about repeated calculations to notice when the decimal form terminates in 0s or eventually repeats. They add, subtract, multiply, and divide with positive rational numbers as they solve real-world problems, such as comparing sizes of granola bar boxes and analyzing fruit production.
* In **Unit 5**, students use contexts, such as floats and anchors attached to submarines and bumpers and extending to other real-world contexts, to describe how opposite quantities combine to make zero. They use absolute value and distance along number lines to understand what it means to add positive and negative rational numbers. Students use additive inverses, absolute value, and distance along number lines to understand what it means to subtract positive and negative rational numbers. They use additive inverses, the commutative property, and the associative property to add and subtract rational numbers. Students extend the floats and anchors context to make sense of multiplying signed numbers and connect the distributive property to understand why the product of two negative numbers is positive. They use the context of turtle races to make sense of dividing signed numbers. Students apply the commutative and distributive properties when multiplying rational numbers. They apply what they have learned to solve problems involving the four operations with rational numbers.
* In **Unit 7**, students calculate with rational numbers to solve problems involving angle relationships, area, surface area, and volume.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.NS.1a | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. Describe situations in which opposite quantities combine to make 0. | *Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.*  **Student Edition**   * 5.01 ([Activity 2, Screens 8–9 and click on the Sample Responses tab for Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/27143364-6767-48db-b15b-247685de9198)) * 5.02 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/9169d3a7-518d-4e61-98e4-bcfd484c9476)) * 5.05 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ee477991-5472-4b8a-ad86-b300816b5821)) * 5.03 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62b74ab9-d263-4cdb-9913-6b469cd5f9aa)) * 5.03 ([Synthesis, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/517550de-4ed5-4b06-baf2-d80b105c1218)) * 5.04 ([Activities 1–2, Problems 6–7, pages 426–427](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 5.03 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition page 422](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=7)) * 5.04 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 426](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=4)) * 5.02 ([Activity 2, Launch, Screen 6, paragraph that begins with “To support making connections”, page 413](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=5))   *Describe situations in which opposite quantities combine to make 0.*  **Student Edition**   * 5.01 ([Activity 1, Screens 2](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/d6f0d859-5244-46d5-b708-2f1da3c43f3f) and [5 and click on the Sample Responses tab for Screen 5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/a6f2c74d-bf0d-43aa-b153-a67350bb8650)) * 5.01 ([Activity 3, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/15b75c31-f0fb-41c8-8477-16b86f53fa08)) * 5.01 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/0a10f9ab-46bf-408e-a7d1-dc4340b0152a)) * 5.03 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/51a329f4-6aa6-4d4e-9bc7-6103e65bf96c) and [Screen 4: Enter a response for part b to view part c](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/a7e403ae-771e-4a88-8703-432fe7c012ed)) * 5.01 ([Practice, Screen 4, Problem 4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98d00529?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/5ecb0e7c-0f3b-40c5-8c58-6b58d1b98d22)) * Unit 5 ([Practice Day 1, Task Cards: Task C, Problem 1 and Task D, Problem 1](https://learning.amplify.com/m/47f5311b04ef31f8/original/ADM-G7-U5-practice-day-1-sheet-CA.pdf#page=2))   **Teacher Edition**   * 5.01 ([Activity 1, entire Launch section, page 404](https://learning.amplify.com/m/567f1b426a35c2e1/original/ADM-G7-U5-01-TE-CA.pdf#page=4)) * 5.01 ([Activity 3, Launch, paragraph that begins with “To support making connections”, page 407](https://learning.amplify.com/m/567f1b426a35c2e1/original/ADM-G7-U5-01-TE-CA.pdf#page=7)) |  |  |  |
| 7.NS.1b | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. Understand *p + q* as the number located a distance |*q*| from *p*, in the positive or negative direction depending on whether *q* is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. | *Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.*  **Student Edition**   * 5.01 ([Activity 2, Screens 8–9 and click on the Sample Responses tab for Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/27143364-6767-48db-b15b-247685de9198)) * 5.02 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/9169d3a7-518d-4e61-98e4-bcfd484c9476)) * 5.05 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ee477991-5472-4b8a-ad86-b300816b5821)) * 5.03 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62b74ab9-d263-4cdb-9913-6b469cd5f9aa)) * 5.03 ([Synthesis, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/517550de-4ed5-4b06-baf2-d80b105c1218)) * 5.04 ([Activities 1–2, Problems 6–7, pages 426–427](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 5.03 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition page 422](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=7)) * 5.04 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 426](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=4)) * 5.02 ([Activity 2, Launch, Screen 6, paragraph that begins with “To support making connections”, page 413](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=5))   *Understand p + q as the number located a distance |q| from p, in the positive or negative direction, depending on whether q is positive or negative.*  **Student Edition**   * 5.03 ([Activities 1–2, Screens 3–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c64907aef8d98cf7617#preview/51a329f4-6aa6-4d4e-9bc7-6103e65bf96c)) * 5.03 ([entire Summary section, Screen 14](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c64907aef8d98cf7617#preview/0b5e04f3-715a-4fd1-8e56-d0a592179506)) * 5.04 ([Activity 3, You’re Invited to Explore More, Problem 11, Statements B and C, page 428](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=4))   **Teacher Edition**   * 5.03 ([entire Synthesis section, page 422](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=7)) * 5.03 ([Warm-Up, entire Connect section, page 418](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=3)) * 5.03 ([Activity 2, Monitor, paragraph that begins with “To support students getting started” and Differentiation, page 420](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=5))   *Show that a number and its opposite have a sum of 0 (are additive inverses).*  **Student Edition**   * 5.01 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c64907aef8d98cf7617#preview/d6f0d859-5244-46d5-b708-2f1da3c43f3f)) * 5.01 ([Activity 3, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c64907aef8d98cf7617#preview/15b75c31-f0fb-41c8-8477-16b86f53fa08)) * 5.01 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c64907aef8d98cf7617#preview/0a10f9ab-46bf-408e-a7d1-dc4340b0152a)) * 5.03 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/51a329f4-6aa6-4d4e-9bc7-6103e65bf96c) and [Screen 4: Enter a response for part b to view part c](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/a7e403ae-771e-4a88-8703-432fe7c012ed)) * 5.01 ([Practice, Screen 4, Problem 4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98d00529?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/5ecb0e7c-0f3b-40c5-8c58-6b58d1b98d22))   **Teacher Edition**   * 5.01 ([Activity 1, entire Launch section, page 404](https://learning.amplify.com/m/567f1b426a35c2e1/original/ADM-G7-U5-01-TE-CA.pdf#page=4)) * 5.01 ([Activity 3, Launch, paragraph that begins with “To support making connections”, page 407](https://learning.amplify.com/m/567f1b426a35c2e1/original/ADM-G7-U5-01-TE-CA.pdf#page=7)) * 5.03 ([Activity 1, Monitor, Differentiation, page 419](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=4))   *Interpret sums of rational numbers by describing real-world contexts.*  **Student Edition**   * 5.11 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c64907aef8d98cf7617#preview/0e1eb07b-9f6f-41f7-ac99-5f2899c44cd6)) * 5.11 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c64907aef8d98cf7617#preview/c1a33e75-ff1e-4457-b9aa-9bd434f49ea2)) * 5.11 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c64907aef8d98cf7617#preview/6dcb3974-fd4e-4915-b84c-cd9468f25663)) * Unit 5 ([Practice Day 1, Task Cards: Tasks B and C](https://learning.amplify.com/m/47f5311b04ef31f8/original/ADM-G7-U5-practice-day-1-sheet-CA.pdf))   **Teacher Edition**   * 5.11 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 482](https://learning.amplify.com/m/64c6e17843646cba/original/ADM-G7-U5-11-TE-CA.pdf#page=4)) |  |  |  |
| 7.NS.1c | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. Understand subtraction of rational numbers as adding the additive inverse, *p – q = p + (–q)*. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. | *Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.*  **Student Edition**   * 5.01 ([Activity 2, Screens 8–9 and click on the Sample Responses tab for Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/27143364-6767-48db-b15b-247685de9198)) * 5.02 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/9169d3a7-518d-4e61-98e4-bcfd484c9476)) * 5.05 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ee477991-5472-4b8a-ad86-b300816b5821)) * 5.03 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62b74ab9-d263-4cdb-9913-6b469cd5f9aa)) * 5.03 ([Synthesis, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/517550de-4ed5-4b06-baf2-d80b105c1218)) * 5.04 ([Activities 1–2, Problems 6–7, pages 426–427](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 5.03 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition page 422](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=7)) * 5.04 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 426](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=4)) * 5.02 ([Activity 2, Launch, Screen 6, paragraph that begins with “To support making connections”, page 413](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=5))   *Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q).*  **Student Edition**   * 5.02 ([Activities 1–2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/a316302c-77be-4d4b-8bc5-2acea6fa382b)) * 5.02 ([Synthesis, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/6ddb5bc1-ca2d-49ed-bc10-5b20358308e9)) * 5.02 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/48cabfae-f25e-411c-9994-95c9240402c4)) * 5.04 ([Activity 1, Problems 5–6, page 426](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 5.02 ([Activity 2, entire Connect, including the Key Takeaway, page 414](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=6)) * 5.02 ([entire Synthesis section, page 415](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=7))   *Show that the distance between two rational numbers on the number line is the absolute value of their difference.*  **Student Edition**   * 5.04 ([Activity 3, Problems 9–10, page 428](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=4)) * 5.04 ([Summary, paragraph that begins with “The distance between”, page 429](https://learning.amplify.com/m/7808885dab290968/original/ADM-G7-U5-04-SE-practice-CA.pdf))   **Teacher Edition**   * 5.04 ([Activity 3, entire Monitor and Connect sections, including the Key Takeaway, page 428](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=6))   *Apply this principle in real-world contexts.*  **Student Edition**   * Unit 5 ([Practice Day 1, Task Cards: Task B, Problem 2](https://learning.amplify.com/m/47f5311b04ef31f8/original/ADM-G7-U5-practice-day-1-sheet-CA.pdf)) * 5.02 ([Practice, Screen 4, Problem 7](https://teacher.desmos.com/activitybuilder/custom/68078c67907aef8d98d00b1a?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/c0fc5f5f-97ff-406d-992d-e04da8498ffc)) |  |  |  |
| 7.NS.1d | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. Apply properties of operations as strategies to add and subtract rational numbers. | *Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.*  **Student Edition**   * 5.01 ([Activity 2, Screens 8–9 and click on the Sample Responses tab for Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/27143364-6767-48db-b15b-247685de9198)) * 5.02 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf8d80?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/9169d3a7-518d-4e61-98e4-bcfd484c9476)) * 5.05 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ee477991-5472-4b8a-ad86-b300816b5821)) * 5.03 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62b74ab9-d263-4cdb-9913-6b469cd5f9aa)) * 5.03 ([Synthesis, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/517550de-4ed5-4b06-baf2-d80b105c1218)) * 5.04 ([Activities 1–2, Problems 6–7, pages 426–427](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 5.03 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition page 422](https://learning.amplify.com/m/410d64bd9b547a70/original/ADM-G7-U5-03-TE-CA.pdf#page=7)) * 5.04 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 426](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=4)) * 5.02 ([Activity 2, Launch, Screen 6, paragraph that begins with “To support making connections”, page 413](https://learning.amplify.com/m/5ea59e199b44b86e/original/ADM-G7-U5-02-TE-CA.pdf#page=5))   *Apply properties of operations as strategies to add and subtract rational numbers.*  **Student Edition**   * 5.01 ([Activity 1, Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf835a?collections=68078c64907aef8d98cf7617#preview/d6f0d859-5244-46d5-b708-2f1da3c43f3f)) * 5.03 ([Activity 1, Screen 4, and Enter a response for part b to view part c](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cf94f8?collections=68078c64907aef8d98cf7617#preview/a7e403ae-771e-4a88-8703-432fe7c012ed)) * 5.04 ([Warm-Up, Problem 1, page 425](https://learning.amplify.com/m/71cab67d16dda1f2/original/ADM-G7-U5-04-SE-lesson-answer-key-CA.pdf)) * 5.05 ([Activities 1–2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c64907aef8d98cf7617#preview/d1ab5292-fe29-4694-afd4-09b662fc20f7)) * 5.05 ([Summary, bullet that begins with “Combine numbers”, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c64907aef8d98cf7617#preview/5eaeefe4-3e13-438e-b1b7-71fed27443a8))   **Teacher Edition**   * 5.04 ([Warm-Up, Connect, bulleted list that begins with “Consider asking” page 425](https://learning.amplify.com/m/19a3e90741bf478a/original/ADM-G7-U5-04-TE-CA.pdf#page=3)) * 5.05 ([Activity 1, Monitor, Differentiation, rows that begin with “Extend their understanding” and “Solve the puzzles”, page 434](https://learning.amplify.com/m/3ba9b22522ddc6a/original/ADM-G7-U5-05-TE-CA.pdf#page=5)) |  |  |  |
| 7.NS.2a | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. | *Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.*  **Student Edition**   * 5.06 ([Activities 1–2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/320b52a9-53e5-41b1-9991-8866188e4049)) * 5.07 ([Activities 1–2, Screens 3–7](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3a685d3e-8080-4a40-b8fe-9242d8972ddb)) * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23)) * 5.06 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62576e71-7c33-4278-b41b-e971db73c2b4))   **Teacher Edition**   * 5.10 ([Activity 2, Monitor, Screen 7 Differentiation, page 474](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=5)) * 5.07 ([Activity 2, entire Connect section, page 453](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=6)) * 5.08 ([Activity 1, entire Monitor section, page 459](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=4)) * 5.08 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property.*  **Student Edition**   * 5.09 ([Activity 3, Problems 9–10, page 468](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=4)) * 5.10 ([Activity 1, Screens 2–4 and click on the Sample Responses tab for Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/d37464a2-9ec7-4b2f-973c-a82e60da29fc))   **Teacher Edition**   * 5.09 ([Activity 3, entire Monitor section, page 468](https://learning.amplify.com/m/1ee632e480c37bb7/original/ADM-G7-U5-09-TE-CA.pdf#page=6)) * 5.10 ([Activity 1, Monitor, paragraphs that begin with “To support students getting started” and “Note:”, and entire Connect section, page 473](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=4))   *Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers.*  **Student Edition**   * 5.06 ([Synthesis, Screen 9 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/a3fd5c9e-9974-405b-931e-e3c10e277975)) * 5.07 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/59678e71-3fe3-41d5-a8ae-e8d63bb9d141)) * 5.07 ([Synthesis, Screen 11 and click the on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ec3959cf-f926-4b59-8e08-2667b68a24a1)) * 5.06 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62576e71-7c33-4278-b41b-e971db73c2b4)) * 5.06 ([Activity 2, Screen 6 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/8198cedb-80b3-470b-9fa3-36d84e5b5cb0))   **Teacher Edition**   * 5.06 ([entire Synthesis section and Lesson Takeaway, page 447](https://learning.amplify.com/m/85cf55bdef3452e/original/ADM-G7-U5-06-TE-CA.pdf#page=7)) * 5.09 ([Activity 3, entire Connect section, including the Key Takeaway, page 468](https://learning.amplify.com/m/1ee632e480c37bb7/original/ADM-G7-U5-09-TE-CA.pdf#page=6))   *Interpret products of rational numbers by describing real-world contexts.*  **Student Edition**   * 5.07 ([Activity 1, Screens 4–6](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/e81ce700-5914-4fe2-bcac-a0ccbf368376)) * 5.07 ([Synthesis, Screen 11 and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ec3959cf-f926-4b59-8e08-2667b68a24a1)) * 5.13 ([Activity 1, Problem 5, page 495](https://learning.amplify.com/m/26553a1affeb5720/original/ADM-G7-U5-13-SE-lesson-answer-key-CA.pdf#page=2)) * 5.13 ([Activity 2, Problems 7–11, pages 496–497](https://learning.amplify.com/m/26553a1affeb5720/original/ADM-G7-U5-13-SE-lesson-answer-key-CA.pdf#page=3) and [Activity 2 Sheet](https://learning.amplify.com/m/7b0a41c7f95ad716/original/ADM-G7-U5-13-sheet-CA.pdf)) * 5.13 ([entire Summary section, page 498](https://learning.amplify.com/m/2382ad1559d3cfc8/original/ADM-G7-U5-13-SE-practice-answer-key-CA.pdf))   **Teacher Edition**   * 5.13 ([Activity 2, entire Monitor section, page 496](https://learning.amplify.com/m/25fc05c1531a2ccb/original/ADM-G7-U5-13-TE-CA.pdf#page=5)) * 5.07 ([Activity 2, Connect, paragraph that begins with “Consider asking”, page 453](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=6)) |  |  |  |
| 7.NS.2b | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If *p* and *q* are integers, then *–(p/q)* *= (–p)/q = p/(–q)*. Interpret quotients of rational numbers by describing real world contexts. | *Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.*  **Student Edition**   * 5.06 ([Activities 1–2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/320b52a9-53e5-41b1-9991-8866188e4049)) * 5.07 ([Activities 1–2, Screens 3–7](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3a685d3e-8080-4a40-b8fe-9242d8972ddb)) * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23)) * 5.06 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62576e71-7c33-4278-b41b-e971db73c2b4))   **Teacher Edition**   * 5.10 ([Activity 2, Monitor, Screen 7 Differentiation, page 474](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=5)) * 5.07 ([Activity 2, entire Connect section, page 453](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=6)) * 5.08 ([Activity 1, entire Monitor section, page 459](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=4)) * 5.08 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number.*  **Student Edition**   * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23)) * 5.08 ([Practice, Screen 4, Problem 6](https://teacher.desmos.com/activitybuilder/custom/68078c67907aef8d98d024a3?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/0cab7b3d-fa9b-49b7-a000-ef057feac777)) * 5.08 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/e5248a32-70d3-4e8d-aca4-17635b29a73a)) * 5.09 ([Activity 2, Problem 6, Statement C, page 467](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=3))   **Teacher Edition**   * 5.08 ([entire Synthesis section and Lesson Takeaway, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *If p and q are integers, then –(p/q) = (–p)/q = p/(–q).*  **Student Edition**   * 5.08 ([Activity 2, Screens 6–7](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/31b1803f-4bf0-4442-9ae9-9610352b2350)) * 5.08 ([Synthesis, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/0095d855-e3ba-464b-a0d6-2d679ab9af92)) * 5.08 ([Show What You Know, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/66b2a1af-bc08-43ce-b248-803ed37950c9)) * 5.08 ([Practice, Screen 1, Problem 1](https://teacher.desmos.com/activitybuilder/custom/68078c67907aef8d98d024a3?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/f7f3ab5e-f86f-4d9f-a362-e3d759296916))   **Teacher Edition**   * 5.08 ([Activity 2, Monitor, Screen 6 Differentiation, and entire Connect section, page 461](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=6)) * 5.08 ([entire Synthesis section and Lesson Takeaway, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *Interpret quotients of rational numbers by describing real-world contexts.*  **Student Edition**   * 5.12 ([Activity 1, Problem 5, page 489](https://learning.amplify.com/m/47d3af1aa9f6c20c/original/ADM-G7-U5-12-SE-lesson-answer-key-CA.pdf#page=2) and [Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfebc4?collections=68078c64907aef8d98cf7617#preview/3e051d68-0d36-419c-879a-e1a79bf4d65a)) * 5.12 ([Activity 2, Problem 9, page 490](https://learning.amplify.com/m/47d3af1aa9f6c20c/original/ADM-G7-U5-12-SE-lesson-answer-key-CA.pdf#page=3)) * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23))   **Teacher Edition**   * 5.08 ([Activity 1, Monitor, paragraph that begins with “Pause”, page 459](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=4)) |  |  |  |
| 7.NS.2c | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Apply properties of operations as strategies to multiply and divide rational numbers. | *Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.*  **Student Edition**   * 5.06 ([Activities 1–2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/320b52a9-53e5-41b1-9991-8866188e4049)) * 5.07 ([Activities 1–2, Screens 3–7](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3a685d3e-8080-4a40-b8fe-9242d8972ddb)) * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23)) * 5.06 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62576e71-7c33-4278-b41b-e971db73c2b4))   **Teacher Edition**   * 5.10 ([Activity 2, Monitor, Screen 7 Differentiation, page 474](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=5)) * 5.07 ([Activity 2, entire Connect section, page 453](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=6)) * 5.08 ([Activity 1, entire Monitor section, page 459](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=4)) * 5.08 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *Apply properties of operations as strategies to multiply and divide rational numbers.*  **Student Edition**   * 5.09 ([Activity 3, Problems 9–10, page 468](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=4)) * 6.08 ([Activity 1, Problems 2–5, page 564](https://learning.amplify.com/m/666f7c05a1c22596/original/ADM-G7-U6-08-SE-lesson-answer-key-CA.pdf#page=2)) * 6.08 ([Activity 3, Problems 7–9, page 566](https://learning.amplify.com/m/666f7c05a1c22596/original/ADM-G7-U6-08-SE-lesson-answer-key-CA.pdf#page=4)) * 5.10 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/d37464a2-9ec7-4b2f-973c-a82e60da29fc)) * 5.09 ([Warm-Up, Problem 1, part c, page 465](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf)) * 5.09 ([Activity 2, Problem 7, Statement D, page 467](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=3))   **Teacher Edition**   * 5.09 ([Warm-Up, Connect, MLR8: Discussion Supports, page 465](https://learning.amplify.com/m/1ee632e480c37bb7/original/ADM-G7-U5-09-TE-CA.pdf#page=3)) * 5.09 ([Activity 3, entire Monitor section, page 468](https://learning.amplify.com/m/1ee632e480c37bb7/original/ADM-G7-U5-09-TE-CA.pdf#page=6)) |  |  |  |
| 7.NS.2d | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats. | *Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.*  **Student Edition**   * 5.06 ([Activities 1–2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/320b52a9-53e5-41b1-9991-8866188e4049)) * 5.07 ([Activities 1–2, Screens 3–7](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfbf9c?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3a685d3e-8080-4a40-b8fe-9242d8972ddb)) * 5.08 ([Activity 1, Screens 2–5](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfcc65?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3c5294a2-f1fa-4bdf-b405-546f424ebb23)) * 5.06 ([entire Summary section, Screen 12](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfb4cd?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/62576e71-7c33-4278-b41b-e971db73c2b4))   **Teacher Edition**   * 5.10 ([Activity 2, Monitor, Screen 7 Differentiation, page 474](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=5)) * 5.07 ([Activity 2, entire Connect section, page 453](https://learning.amplify.com/m/50c07bcf37ca949d/original/ADM-G7-U5-07-TE-CA.pdf#page=6)) * 5.08 ([Activity 1, entire Monitor section, page 459](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=4)) * 5.08 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 462](https://learning.amplify.com/m/65998df8c76bc13/original/ADM-G7-U5-08-TE-CA.pdf#page=7))   *Convert a rational number to a decimal using long division.*  **Student Edition**   * 4.13 ([Activity 1, Problems 2–3, page 386](https://learning.amplify.com/m/36a485a8d6b129dc/original/ADM-G7-U4-13-SE-lesson-answer-key-CA.pdf#page=2)) * 6.08 ([Practice, Screens 9 and 10, Problems 11–12](https://teacher.desmos.com/activitybuilder/custom/68078c6b907aef8d98d121d0?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d%2C68078c6a907aef8d98d0ffda#preview/168a8cda-e975-4734-9080-42488b6db2ba))   *Know that the decimal form of a rational number terminates in 0s or eventually repeats.*  **Student Edition**   * 4.13 ([Activity 1, Problems 2–5, page 386](https://learning.amplify.com/m/36a485a8d6b129dc/original/ADM-G7-U4-13-SE-lesson-answer-key-CA.pdf#page=2)) * 4.13 ([Activity 2, Problems 6–10, page 387](https://learning.amplify.com/m/36a485a8d6b129dc/original/ADM-G7-U4-13-SE-lesson-answer-key-CA.pdf#page=3)) * 4.13 ([Activity 3, Problem 11, page 388](https://learning.amplify.com/m/36a485a8d6b129dc/original/ADM-G7-U4-13-SE-lesson-answer-key-CA.pdf#page=4)) * 4.13 ([entire Summary section, page 389](https://learning.amplify.com/m/4b662b293cd39415/original/ADM-G7-U4-13-SE-practice-answer-key-CA.pdf)) * 5.11 ([Practice, Screen 6, Problems 8–10](https://teacher.desmos.com/activitybuilder/custom/68078c67907aef8d98d03231?collections=68078c64907aef8d98cf7617%2C68078c66907aef8d98d003f8#preview/a7098468-a9f6-4c60-a83c-c18257344a01))   **Teacher Edition**   * 4.13 ([Activity 1, entire Monitor and Connect sections, page 386](https://learning.amplify.com/m/57bc91ebd0b08dda/original/ADM-G7-U4-13-TE-CA.pdf#page=4)) * 4.13 ([Activity 3, Monitor, paragraphs that begin with "To support students getting started" and "Look for", page 388](https://learning.amplify.com/m/57bc91ebd0b08dda/original/ADM-G7-U4-13-TE-CA.pdf#page=6)) |  |  |  |
| 7.NS.3 | Solve real-world and mathematical problems involving the four operations with rational numbers.[[2]](#footnote-1) | *Solve real-world problems involving the four operations with rational numbers.*  **Student Edition**   * 5.11 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/0e1eb07b-9f6f-41f7-ac99-5f2899c44cd6)) * 5.11 ([Activity 2, Screen 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/c1a33e75-ff1e-4457-b9aa-9bd434f49ea2)) * 5.11 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/6dcb3974-fd4e-4915-b84c-cd9468f25663)) * 5.12 ([Activity 2, Problems 8–9, page 490](https://learning.amplify.com/m/47d3af1aa9f6c20c/original/ADM-G7-U5-12-SE-lesson-answer-key-CA.pdf#page=3)) * 5.13 ([Activity 2, Problems 8–11, pages 496–497](https://learning.amplify.com/m/26553a1affeb5720/original/ADM-G7-U5-13-SE-lesson-answer-key-CA.pdf#page=3) and [Activity 2 Sheet](https://learning.amplify.com/m/7b0a41c7f95ad716/original/ADM-G7-U5-13-sheet-CA.pdf))   **Teacher Edition**   * 5.12 ([Activity 2, Monitor, Differentiation, page 490](https://learning.amplify.com/m/4a071f0d7120d242/original/ADM-G7-U5-12-TE-CA.pdf#page=5)) * 5.11 ([Activity 1, Monitor, Differentiation, page 482](https://learning.amplify.com/m/64c6e17843646cba/original/ADM-G7-U5-11-TE-CA.pdf#page=4))   *Solve mathematical problems involving the four operations with rational numbers.*  **Student Edition**   * 5.09 ([Activity 1, Problems 2–4, page 466](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=2) and [Activity 1 Cards](https://learning.amplify.com/m/6c54a4cdaf44c9d6/original/ADM-G7-U5-09-cards-CA.pdf)) * 5.09 ([Activity 2, Problems 6–8, page 467](https://learning.amplify.com/m/709c9278b6a256a8/original/ADM-G7-U5-09-SE-lesson-answer-key-CA.pdf#page=3)) * 5.10 ([Activity 1, Screens 2–3](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/d37464a2-9ec7-4b2f-973c-a82e60da29fc)) * 5.10 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/5f058eb9-1e31-45a2-91a2-361f9e7ba8d1)) * 4.12 ([Warm-Up, Problems 1–4, page 379](https://learning.amplify.com/m/280f5f9188192a23/original/ADM-G7-U4-12-SE-lesson-answer-key-CA.pdf))   **Teacher Edition**   * 5.10 ([Activity 1, entire Monitor section, page 473](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=4)) * 5.09 ([Activity 1, Launch, paragraphs that begin with “Display” and “Invite students”, page 466](https://learning.amplify.com/m/1ee632e480c37bb7/original/ADM-G7-U5-09-TE-CA.pdf#page=4) and [Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfd7b1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/6d4c7a2b-d357-4477-8ba3-57985cce5dee)) |  |  |  |

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### Domain: Expressions and Equations

##### Cluster: Use properties of operations to generate equivalent expressions.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in Units 4 and 6.

* In **Unit 4**, students write expressions in different forms, such as (1 – 0.72)*b* and 1*b* – 0.72*b*, to represent a percent increase and illustrate how the quantities are related.
* In **Unit 6**, students use visual models to add, subtract, factor, and expand linear expressions, including those involving rational coefficients. Using the distributive property, they write expressions in the form *px* + *q* as *p*(*x* + *q*) and vice versa to illustrate how the quantities are related.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.EE.1 | Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. | *Apply properties of operations as strategies to add and subtract linear expressions with rational coefficients.*  **Student Edition**   * 6.10 ([Activities 1–2, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0b7d1?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/75af0d8f-1ef6-4c5a-b1b1-50a932415cd5)) * 6.10 ([Practice, Screens 1–4, Problems 1–4](https://teacher.desmos.com/activitybuilder/custom/68078c6b907aef8d98d12ae3?collections=68078c68907aef8d98d06b9d%2C68078c6a907aef8d98d0ffda#preview/000b5728-0ce9-4ea6-8c44-c961776681c9)) * 6.10 ([entire Summary section, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0b7d1?collections=68078c68907aef8d98d06b9d#preview/fa160b02-b4c9-4f87-ac6f-c4278ab4aa19))   **Teacher Edition**   * 6.10 ([Activity 2, entire Connect section, including the Key Takeaway, page 582](https://learning.amplify.com/m/29ae5f4a089c0b04/original/ADM-G7-U6-10-TE-CA.pdf#page=7))   *Apply properties of operations as strategies to factor and expand linear expressions with rational coefficients.*  **Student Edition**   * 6.08 ([Activity 1, Problems 2–5, page 564](https://learning.amplify.com/m/666f7c05a1c22596/original/ADM-G7-U6-08-SE-lesson-answer-key-CA.pdf#page=2)) * 6.09 ([Activities 1–2, Screens 3–9](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0b00d?collections=68078c68907aef8d98d06b9d#preview/f85d252d-e289-4c3e-9c11-9be7d225eb8e)) * 6.09 ([entire Summary section, Screen 16](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0b00d?collections=68078c68907aef8d98d06b9d#preview/3c1ee4ca-942f-469a-b473-9c7a3f0358e5)) * 6.08 ([entire Summary section, page 567](https://learning.amplify.com/m/796850f9881cfc89/original/ADM-G7-U6-08-SE-practice-answer-key-CA.pdf))   **Teacher Edition**   * 6.09 ([Activity 2, entire Monitor section, page 573](https://learning.amplify.com/m/54ad97d86feed3d3/original/ADM-G7-U6-09-TE-CA.pdf#page=6)) |  |  |  |
| 7.EE.2 | Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. | *Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.*  **Student Edition**   * 4.03 ([Activities 2–3, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ceb808?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/bf78fd7b-9ebd-42c8-b111-76eae9346eaa)) * 4.03 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ceb808?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/a1c16aa7-bdeb-4db5-a99a-1e96c3c0318d)) * 6.08 ([Activity 1, Problems 2–5, page 564](https://learning.amplify.com/m/666f7c05a1c22596/original/ADM-G7-U6-08-SE-lesson-answer-key-CA.pdf#page=2)) * 4.07 ([Activities 1–2, Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ced9be?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/ffb848f9-480a-4de9-9f21-c6f9fe5a6154))   **Teacher Edition**   * 4.03 ([Activity 1, Monitor, Differentiation, and entire Connect section, page 308](https://learning.amplify.com/m/5d955cb0abc099f3/original/ADM-G7-U4-03-TE-CA.pdf#page=4)) * 4.03 ([Activity 2, Monitor, paragraph that begins with “Encourage students” and entire Connect section, including the Key Takeaway, page 309](https://learning.amplify.com/m/5d955cb0abc099f3/original/ADM-G7-U4-03-TE-CA.pdf#page=5)) * 6.08 ([Activity 1, entire Connect section, including the Key Takeaway, page 564](https://learning.amplify.com/m/1df0f3e6744a9dea/original/ADM-G7-U6-08-TE-CA.pdf#page=4)) |  |  |  |

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##### 

##### Cluster: Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

### How does the program address this aspect of the domain?

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### Amplify Desmos Math California addresses this aspect of the domain in Units 2, 3, 4, 5, 6, 7, and 8.

### In Unit 2, calculate with positive rational numbers to solve problems involving proportional relationships. Through real-world contexts — such as robot design, travel times, turtle races, and water efficiency, students write equations to represent proportional relationships.

### In Unit 3, students use variables in equations, such as *C* = *πd* and *A* = *πr*2, to calculate measurements in circles.

### In Unit 4, students calculate with positive rational numbers and convert between percentages and decimals as they write and solve equations to solve problems involving sales tax, tips, minimum wage, percent error, and pollution. They write and solve equations involving multi-step ratio and percent problems.

### In Unit 5, students solve problems — such as puzzles, and in contexts such as world temperatures, Arctic sea ice levels, and solar panels — that involve calculations with positive and negative rational numbers.

### In Unit 6, students represent and solve problems involving positive and negative rational numbers using expressions, equations, and inequalities. They develop fluency in solving equations of the form *px* + *q* = *r* and *p*(*x* + *q*) = *r*, as they write equations of these forms to represent and solve mathematical and real-world problems involving rational numbers. Students solve word problems involving inequalities of the form *px* + *q* > *r* or *px* + *q* < *r*, graph the solution set on a number line, and interpret the solution within the context of the problem. They reason about proportional relationships as they connect real-world contexts, tape diagrams, and equations.

### In Unit 7, students write and solve equations involving angle relationships to determine unknown angle measures.

### In Unit 8, students calculate and represent probabilities, including those that stem from multi-step calculations, using fractions, decimals, and percentages. They use percentages to make inferences about populations from random samples.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.EE.3 | Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. | *Solve multi-step real-life problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.* Student Edition6.04 ([Activity 1, Problems 3–6, page 536](https://learning.amplify.com/m/376156feaeb3cccd/original/ADM-G7-U6-04-SE-lesson-answer-key-CA.pdf#page=2))5.11 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfe603?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/c1a33e75-ff1e-4457-b9aa-9bd434f49ea2))5.12 ([Activity 1, Problems 5–6, page 489](https://learning.amplify.com/m/47d3af1aa9f6c20c/original/ADM-G7-U5-12-SE-lesson-answer-key-CA.pdf#page=2) and [Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfebc4?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/3e051d68-0d36-419c-879a-e1a79bf4d65a))5.13 ([Activity 2, Problems 8–11, pages 496–497](https://learning.amplify.com/m/26553a1affeb5720/original/ADM-G7-U5-13-SE-lesson-answer-key-CA.pdf#page=3) and [Activity 2 Sheet](https://learning.amplify.com/m/7b0a41c7f95ad716/original/ADM-G7-U5-13-sheet-CA.pdf))Teacher Edition6.04 ([Activity 1, entire Launch section, page 536](https://learning.amplify.com/m/364de36f40c3e9c/original/ADM-G7-U6-04-TE-CA.pdf#page=4))5.11 ([Activity 2, Monitor, Screen 8 Differentiation, page 484](https://learning.amplify.com/m/64c6e17843646cba/original/ADM-G7-U5-11-TE-CA.pdf#page=6))*Solve multi-step mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.* Student Edition6.05 ([Activity 1, Screens 2–6](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d09328?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/ee2d3f82-752d-4929-9552-f844c0e3b714))5.05 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/ee477991-5472-4b8a-ad86-b300816b5821))5.10 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/5f058eb9-1e31-45a2-91a2-361f9e7ba8d1))Teacher Edition5.10 ([entire Synthesis section and Lesson Takeaway, page 476](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=7))6.05 ([Activity 1, Monitor, Differentiation, and entire Connect section, including the Key Takeaway, page 545](https://learning.amplify.com/m/76917f5cf007c066/original/ADM-G7-U6-05-TE-CA.pdf#page=5))*Apply properties of operations to calculate with numbers in any form.*Student Edition5.05 ([Activity 1, Screen 5](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/e7073852-a89b-4820-b930-bf7bca2f9e74))5.10 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/d37464a2-9ec7-4b2f-973c-a82e60da29fc))5.10 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c66907aef8d98cfdc81?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/11d36e9f-f93e-4fe9-8d07-1d1aa1a7e861))Teacher Edition5.05 ([Activity 1, Monitor, Differentiation, row that begins with “Solve the puzzles”, page 434](https://learning.amplify.com/m/3ba9b22522ddc6a/original/ADM-G7-U5-05-TE-CA.pdf#page=5))5.10 ([Activity 1, Monitor, paragraphs that begin with “To support students getting started” and “Note:”, page 473](https://learning.amplify.com/m/69f7e31148f6ebd2/original/ADM-G7-U5-10-TE-CA.pdf#page=4))*Convert between forms as appropriate.*Student Edition6.11 ([Activity 2, Problem 4, page 588](https://learning.amplify.com/m/6856c4c182e75a57/original/ADM-G7-U6-11-SE-lesson-answer-key-CA.pdf#page=3))8.02 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/05e15bc1-b73f-4dd7-a589-c5d9079858d8))Teacher Edition6.11 ([Activity 2, Monitor, Differentiation, row that begins with “Use strategies like”, page 588](https://learning.amplify.com/m/2a14476e351cee8/original/ADM-G7-U6-11-TE-CA.pdf#page=5))8.02 ([Activity 1, Monitor, Differentiation, and Connect, paragraph that begins with “Consider asking”, page 769](https://learning.amplify.com/m/7b07e6966bacd968/original/ADM-G7-U8-02-TE-CA.pdf#page=5))*Assess the reasonableness of answers using mental computation and estimation strategies.*Student Edition6.12 ([Activity 1, Problem 3, page 593](https://learning.amplify.com/m/3ab51defdee1fe5c/original/ADM-G7-U6-12-SE-lesson-answer-key-CA.pdf#page=2) and [Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d0c478?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/616521f5-7b59-4e38-90c0-f34632b99b6f))5.05 ([Warm-Up, Screen 1](https://teacher.desmos.com/activitybuilder/custom/68078c65907aef8d98cfa2c1?collections=68078c56907aef8d98cb768d%2C68078c64907aef8d98cf7617#preview/0b3b222b-1d5c-418e-8287-ce89dac0bd83))Teacher Edition6.12 ([Activity 1, Monitor, Differentiation, and Connect, paragraph that begins with “Invite students”, page 593](https://learning.amplify.com/m/207e251878bc05a5/original/ADM-G7-U6-12-TE-CA.pdf#page=4))6.06 ([Activity 1, Monitor, Screen 4, paragraph that begins with “Consider asking”, page 551](https://learning.amplify.com/m/2a3879cd38df7c1d/original/ADM-G7-U6-06-TE-CA.pdf#page=4)) |  |  |  |
| 7.EE.4a | Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. | *Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.*Student Edition2.04 ([Activity 1, Screen 6](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/561f20bc-a5a4-47e4-8690-5883663d8790))4.03 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ceb808?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/e48a970b-78ae-4ef0-8bc9-58322f21d13e))7.02 ([Activity 2, Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c6c907aef8d98d1a1a1?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/67dce0fd-7d48-43a5-9769-4ddf92c141fa))6.03 ([Activities 1–2, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d087e8?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/9efb3613-ed2c-41d4-9e80-d26f00c09909))6.15 ([Activity 1, Problems 2–3, page 620](https://learning.amplify.com/m/153b7e142baa222d/original/ADM-G7-U6-15-SE-lesson-answer-key-CA.pdf#page=2))3.03 ([Activity 2, Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdca1e?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/d57e127b-26c0-42ed-8a33-44f69e4f70f8))Teacher Edition2.04 ([Activity 1, Connect, paragraph that begins with “To surface the Key Takeaway”, page 126](https://learning.amplify.com/m/2517e9185ae3779a/original/ADM-G7-U2-04-TE-CA.pdf#page=4))4.03 ([Activity 1, Connect, paragraph that begins with “Share”, page 308](https://learning.amplify.com/m/5d955cb0abc099f3/original/ADM-G7-U4-03-TE-CA.pdf#page=4))6.03 ([Activity 1, entire Monitor and Connect sections, page 529](https://learning.amplify.com/m/130b79eef6b189c1/original/ADM-G7-U6-03-TE-CA.pdf#page=5))*Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers.*Student Edition6.12 ([Activities 1–2, Problems 3–5, pages 593–594](https://learning.amplify.com/m/3ab51defdee1fe5c/original/ADM-G7-U6-12-SE-lesson-answer-key-CA.pdf#page=2) and [Activity 2 Sheet](https://learning.amplify.com/m/71636dd59ccc5d52/original/ADM-G7-U6-12-sheet-CA.pdf))Unit 6 ([Practice Day 1, Set A: Problems 8–9 and 12–13, page 599](https://learning.amplify.com/m/16bc6f65f5a9517/original/ADM-G7-U6-SE-practice-day-1-answer-key-CA.pdf#page=2) and [Set B: Problems 8–9 and 12–13, page 601)](https://learning.amplify.com/m/16bc6f65f5a9517/original/ADM-G7-U6-SE-practice-day-1-answer-key-CA.pdf#page=4)6.12 ([Practice, Screens 1–4, Problems 1–4](https://teacher.desmos.com/activitybuilder/custom/68078c6b907aef8d98d134fa?collections=68078c68907aef8d98d06b9d%2C68078c6a907aef8d98d0ffda#preview/d55f0754-427e-4faa-843a-4c36c0661ca3))6.07 ([Practice, Screens 8–10, Problems 11–13](https://teacher.desmos.com/activitybuilder/custom/68078c6b907aef8d98d11dda?collections=68078c68907aef8d98d06b9d%2C68078c6a907aef8d98d0ffda#preview/0f80e33c-9280-453f-8640-589195108e30))Teacher Edition6.12 ([Warm-Up, entire Connect section, page 592](https://learning.amplify.com/m/207e251878bc05a5/original/ADM-G7-U6-12-TE-CA.pdf#page=3))6.04 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 536](https://learning.amplify.com/m/364de36f40c3e9c/original/ADM-G7-U6-04-TE-CA.pdf#page=4))*Solve equations of these forms fluently.*Student Edition6.06 ([Activity 2, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d09da6?collections=68078c68907aef8d98d06b9d#preview/36bb1c92-be59-4037-993c-7cf737b6b3f9))6.07 ([Activity 2, Problems 7–8, page 559](https://learning.amplify.com/m/5d69cade07a07415/original/ADM-G7-U6-07-SE-lesson-answer-key-CA.pdf#page=3))6.07 ([entire Summary section, page 560](https://learning.amplify.com/m/62ea90a45ed48812/original/ADM-G7-U6-07-SE-practice-answer-key-CA.pdf))Teacher Edition6.06 ([Activity 2, Monitor, Differentiation and entire Connect section, page 553](https://learning.amplify.com/m/2a3879cd38df7c1d/original/ADM-G7-U6-06-TE-CA.pdf#page=6))*Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.*Student Edition6.06 ([Activity 1, Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c69907aef8d98d09da6?collections=68078c68907aef8d98d06b9d#preview/0d0c49d2-5590-4075-b397-997dae52c14c))6.12 ([entire Summary section, page 595](https://learning.amplify.com/m/39ffe88fa71b58a6/original/ADM-G7-U6-12-SE-practice-answer-key-CA.pdf))6.06 ([Practice, Screen 1, Problems 1–3](https://teacher.desmos.com/activitybuilder/custom/68078c6a907aef8d98d118a0?collections=68078c68907aef8d98d06b9d%2C68078c6a907aef8d98d0ffda#preview/64ccbbb5-2760-403b-91a7-e55da437cd7f))Teacher Edition6.06 ([Activity 1, Monitor, paragraph that begins with “Listen for”, page 551](https://learning.amplify.com/m/2a3879cd38df7c1d/original/ADM-G7-U6-06-TE-CA.pdf#page=4))6.12 ([Activity 1, Monitor, Differentiation, and entire Connect section, page 593](https://learning.amplify.com/m/207e251878bc05a5/original/ADM-G7-U6-12-TE-CA.pdf#page=4)) |  |  |  |
| 7.EE.4b | Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. Solve word problems leading to inequalities of the form *px + q > r* or *px + q < r*, where *p*, *q*, and *r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. | *Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.*Student Edition2.04 ([Activity 1, Screen 6](https://teacher.desmos.com/activitybuilder/custom/68078c5b907aef8d98cccc19?collections=68078c56907aef8d98cb768d%2C68078c5a907aef8d98cc9fbe#preview/561f20bc-a5a4-47e4-8690-5883663d8790))4.03 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c62907aef8d98ceb808?collections=68078c56907aef8d98cb768d%2C68078c61907aef8d98ce9c6b#preview/e48a970b-78ae-4ef0-8bc9-58322f21d13e))7.02 ([Activity 2, Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c6c907aef8d98d1a1a1?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/67dce0fd-7d48-43a5-9769-4ddf92c141fa))6.03 ([Activities 1–2, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c68907aef8d98d087e8?collections=68078c56907aef8d98cb768d%2C68078c68907aef8d98d06b9d#preview/9efb3613-ed2c-41d4-9e80-d26f00c09909))6.15 ([Activity 1, Problems 2–3, page 620](https://learning.amplify.com/m/153b7e142baa222d/original/ADM-G7-U6-15-SE-lesson-answer-key-CA.pdf#page=2))3.03 ([Activity 2, Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdca1e?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/d57e127b-26c0-42ed-8a33-44f69e4f70f8))Teacher Edition2.04 ([Activity 1, Connect, paragraph that begins with “To surface the Key Takeaway”, page 126](https://learning.amplify.com/m/2517e9185ae3779a/original/ADM-G7-U2-04-TE-CA.pdf#page=4))4.03 ([Activity 1, Connect, paragraph that begins with “Share”, page 308](https://learning.amplify.com/m/5d955cb0abc099f3/original/ADM-G7-U4-03-TE-CA.pdf#page=4))6.03 ([Activity 1, entire Monitor and Connect sections, page 529](https://learning.amplify.com/m/130b79eef6b189c1/original/ADM-G7-U6-03-TE-CA.pdf#page=5))*Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers.*Student Edition6.15 ([Activities 1–2, Problems 2–5, pages 620–621](https://learning.amplify.com/m/153b7e142baa222d/original/ADM-G7-U6-15-SE-lesson-answer-key-CA.pdf#page=2))6.17 ([Warm-Up and Activity 1, Problems 1–4, pages 632–633](https://learning.amplify.com/m/71f4b9f5b0cbf5f4/original/ADM-G7-U6-17-SE-lesson-answer-key-CA.pdf))Teacher Edition6.15 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 620](https://learning.amplify.com/m/31211fd59b837bd4/original/ADM-G7-U6-15-TE-CA.pdf#page=4))*Graph the solution set of the inequality and interpret it in the context of the problem.*Student Edition6.17 ([Activity 2, Problem 5, page 634](https://learning.amplify.com/m/71f4b9f5b0cbf5f4/original/ADM-G7-U6-17-SE-lesson-answer-key-CA.pdf#page=3) and [Activity 2 Cards](https://learning.amplify.com/m/1e4407dfdbaac3b/original/ADM-G7-U6-17-cards-CA.pdf))6.16 ([Activity 1, Screens 3–5](https://teacher.desmos.com/activitybuilder/custom/68078c6a907aef8d98d0e4da?collections=68078c68907aef8d98d06b9d#preview/a3eefbf4-16cc-4533-ba72-f9796eacd3c0))Teacher Edition  * 6.17 ([Activity 2, entire Monitor section, page 634](https://learning.amplify.com/m/25909dbb94415538/original/ADM-G7-U6-17-TE-CA.pdf#page=5)) |  |  |  |

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### Domain: Geometry

##### Cluster: Draw, construct, and describe geometrical figures and describe the relationships between them.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in Units 1, 3, 4, and 7.

* In **Unit 1**, through contexts of robot design, mosaics, basketball courts, state shapes, and buildings around the world, students explore scale drawings of geometric figures, calculate scaled and actual lengths and areas, and reproduce scale drawings at different scales.
* In **Unit 3**, students use toothpicks and dynamic geometry software to discover that some relationships in scaled copies of geometric figures are proportional. They construct and describe circles with varying radii to discover relationships among the center, radius, and diameter of a circle.
* In **Unit 4**, students use scale factors to determine unknown values in proportional relationships involving sticker sizes, some of which involve fractional quantities.
* In **Unit 7**, students use scale factors to determine the surface area of actual structures given three-dimensional models. They construct polygons (with a focus on triangles) based on given side lengths or angle measures, recognizing the number of possible shapes that can be made from those conditions. Students use dynamic geometry software to explore and describe two-dimensional cross sections of three-dimensional figures.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.G.1 | Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. | *Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas.*  **Student Edition**   * 1.07 ([Activities 1–2, Problems 2–8, pages 58–60](https://learning.amplify.com/m/1589b3a7ccf33b77/original/ADM-G7-U1-07-SE-lesson-answer-key-CA.pdf#page=2)) * 1.07 ([Practice, Screens 1–7, Problems 1–9](https://teacher.desmos.com/activitybuilder/custom/68078c59907aef8d98cc48aa?collections=68078c56907aef8d98cb7a75%2C68078c58907aef8d98cc2044#preview/423a83f2-02b8-4034-b74e-e15dae872f56)) * 1.09 ([Activity 1, Problems 2–3, page 71](https://learning.amplify.com/m/3dafa66aeef9578a/original/ADM-G7-U1-09-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 1.07 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 59](https://learning.amplify.com/m/10e8587c82e44366/original/ADM-G7-U1-07-TE-CA.pdf#page=5) and [Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c58907aef8d98cbe807?collections=68078c56907aef8d98cb7a75#preview/ed7e37ff-609f-4f13-9bbc-50b245562f87))   *Solve problems involving scale drawings of geometric figures, including reproducing a scale drawing at a different scale.*  **Student Edition**   * 1.08 ([Activity 2, Problems 5–8, page 66](https://learning.amplify.com/m/48a809e2de14e018/original/ADM-G7-U1-08-SE-lesson-answer-key-CA.pdf#page=3)) * 1.10 ([Activity 1, Screens 5–7](https://teacher.desmos.com/activitybuilder/custom/68078c58907aef8d98cbf7e1?collections=68078c56907aef8d98cb7a75#preview/e8f9abac-3fa8-4e00-9f20-4c2e7ceb9533)) * 1.11 ([Activities 1–2, Problems 5–8, pages 85–86](https://learning.amplify.com/m/278889c900fa35eb/original/ADM-G7-U1-11-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 1.10 ([Activity 1, Monitor, Differentiation, and entire Connect section, including the Key Takeaway, page 78](https://learning.amplify.com/m/40f7aaac2a793f50/original/ADM-G7-U1-10-TE-CA.pdf#page=5)) * 1.08 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 67](https://learning.amplify.com/m/6c9fd90daf9bf4d5/original/ADM-G7-U1-08-TE-CA.pdf#page=6)) |  |  |  |
| 7.G.2 | Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. | *Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions.*  **Student Edition**   * 7.07 ([Activity 1, Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1d78d?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/9d1731e1-413b-4d7d-a6e6-71a21302baf5)) * 7.07 ([Activity 2, Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1d78d?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/27a8a208-bea2-4535-9c2a-774d3e2e8062)) * 7.08 ([Warm-Up, Problem 1, page 703](https://learning.amplify.com/m/295cc3d3164b3610/original/ADM-G7-U7-08-SE-lesson-answer-key-CA.pdf)) * 7.08 ([Activity 1, Problems 3–4, pages 704–705](https://learning.amplify.com/m/295cc3d3164b3610/original/ADM-G7-U7-08-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 7.08 ([Warm-Up, entire Launch and Connect sections, page 703](https://learning.amplify.com/m/e6839cbe13b2b62/original/ADM-G7-U7-08-TE-CA.pdf#page=3) and [Screen 1](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1e0b5?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/0f45e2af-2ec4-4c46-a65d-17e0da75b900))   *Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.*  **Student Edition**   * 7.05 ([Activities 1–3, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1bff4?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/c1b8cc22-1617-4eca-93f3-c1f2b802c98b)) * 7.06 ([Activities 1–2, Screens 4–9](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1cf2d?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/c968d933-8dbf-461d-a65a-f01769ea9155)) * 7.08 ([Activity 2, Problems 6–10, pages 706–707](https://learning.amplify.com/m/295cc3d3164b3610/original/ADM-G7-U7-08-SE-lesson-answer-key-CA.pdf#page=4))   **Teacher Edition**   * 7.08 ([Activity 2, entire Launch section](https://learning.amplify.com/m/e6839cbe13b2b62/original/ADM-G7-U7-08-TE-CA.pdf#page=6) and [Screen 4](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1e0b5?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/9838ff56-b01e-4dbe-9718-b202b34507c3), and [entire Monitor and Connect sections, pages 706–707](https://learning.amplify.com/m/e6839cbe13b2b62/original/ADM-G7-U7-08-TE-CA.pdf#page=6)) * 7.06 ([Synthesis, paragraph that begins with “Capture and share”, page 692](https://learning.amplify.com/m/742db15a009851e/original/ADM-G7-U7-06-TE-CA.pdf#page=8)) |  |  |  |
| 7.G.3 | Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. | *Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.*  **Student Edition**   * 7.09 ([Warm-Up, Activities 1–2, and Synthesis, Screens 1–9](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1eeb6?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/2ac29366-25db-4098-912d-4a957f6cf285)) * 7.09 ([Practice, Screens 1–7, Problems 1–7](https://teacher.desmos.com/activitybuilder/custom/68078c6f907aef8d98d2562b?collections=68078c6c907aef8d98d18584%2C68078c6e907aef8d98d2317b#preview/18a76a8e-dcde-4e3f-9167-15a5d1b28aed))   **Teacher Edition**   * 7.09 ([Activity 2, entire Connect section, including the Key Takeaway, page 718](https://learning.amplify.com/m/79be23abf0a9d9f7/original/ADM-G7-U7-09-TE-CA.pdf#page=6)) |  |  |  |

##### Cluster: Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in Units 1, 3, and 7.

* In **Unit 1**, students explore how different scale factors affect the area of scaled copies and use scale drawings to determine actual areas.
* In **Unit 3**, students use formulas to both approximate and determine the exact circumference and area of circles. They use the relationship between circumference and area to derive the formula for the area of a circle. Students solve real-world problems where they determine whether to calculate the circumference or area of circular objects.
* In **Unit 7**, students use angle relationships — including supplementary, complementary, vertical, and adjacent angles — to write and solve equations to determine missing angle measures. They solve mathematical problems involving area, surface area, and volume and apply their strategies to a real-world context involving containers of popcorn.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.G.4 | Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. | *Know the formulas for the area and circumference of a circle and use them to solve problems.*  **Student Edition**   * 3.03 ([Activity 2, Screens 4–6](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdca1e?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/d57e127b-26c0-42ed-8a33-44f69e4f70f8)) * 3.04 ([Activity 1, Screens 3–4](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdd2f0?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/c70b4f1a-0611-49f7-953e-fb68f81459cf)) * 3.04 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c5e907aef8d98cdd2f0?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/fa658f11-085e-4766-a8d3-2779013992b3)) * 3.07 ([Activity 3, Problems 7–10, page 256](https://learning.amplify.com/m/183efd06c208da69/original/ADM-G7-U3-07-SE-lesson-answer-key-CA.pdf#page=4)) * 3.09 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98ce0928?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/1fa06d3c-2401-4bae-bed7-62b7218538db))   **Teacher Edition**   * 3.03 ([Synthesis, paragraph that begins with “Have students share”, page 227](https://learning.amplify.com/m/43c99b04cbcd683a/original/ADM-G7-U3-03-TE-CA.pdf#page=7)) * 3.07 ([Activity 1, entire Connect section, including the Key Takeaway, page 254](https://learning.amplify.com/m/14acc50206bbc997/original/ADM-G7-U3-07-TE-CA.pdf#page=4) and [Screen 3](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98cdf82f?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/396e9e2c-c5ea-48d7-9c62-9232e3ec06a0)) * 3.07 ([Activity 3, entire Connect section, page 256](https://learning.amplify.com/m/14acc50206bbc997/original/ADM-G7-U3-07-TE-CA.pdf#page=6))   *Give an informal derivation of the relationship between the circumference and area of a circle.*  **Student Edition**   * 3.08 ([Activity 2, Screens 4–8](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98ce0110?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/bc4af566-a46f-4275-bf1d-ffd23fff05d7)) * 3.08 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98ce0110?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/2574210d-27ea-47b0-8f38-e472d470fe2a)) * 3.10 ([Warm-Up and Activity 1, Screens 1–4](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98ce1ec3?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/1f125a30-05e0-4abc-951a-a8e3f61adb27)) * 3.10 ([Synthesis, Screen 8](https://teacher.desmos.com/activitybuilder/custom/68078c5f907aef8d98ce1ec3?collections=68078c56907aef8d98cb768d%2C68078c5e907aef8d98cdac35#preview/4020ecb2-ac47-4625-b37d-bf0ca32445cf))   **Teacher Edition**   * 3.08 ([Activity 2, entire Monitor and Connect sections, including the Key Takeaway, pages 262–263](https://learning.amplify.com/m/99258aacf37c551/original/ADM-G7-U3-08-TE-CA.pdf#page=5)) |  |  |  |
| 7.G.5 | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. | *Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.*  **Student Edition**   * 7.02 ([Activity 2, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c6c907aef8d98d1a1a1?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/218dba41-8132-40ba-9623-48a1d9e46b1e)) * 7.03 ([Activities 2–3, Screens 4–10](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1ae7d?collections=68078c56907aef8d98cb768d%2C68078c6c907aef8d98d18584#preview/068d0040-eea9-4c7f-8a47-3d8235b1ec18)) * 7.04 ([Warm-Up and Activity 1, Problems 1–2, pages 671–672](https://learning.amplify.com/m/4baba3f646dbf97b/original/ADM-G7-U7-04-SE-lesson-answer-key-CA.pdf), and [Activity 1 Cards](https://learning.amplify.com/m/6ad902f668c4cfe4/original/ADM-G7-U7-04-cards-CA.pdf)) * 7.04 ([entire Summary section, page 674](https://learning.amplify.com/m/4535d1e4df6a6d27/original/ADM-G7-U7-04-SE-practice-answer-key-CA.pdf))   **Teacher Edition**   * 7.04 ([Activity 1, Monitor, Differentiation, page 672](https://learning.amplify.com/m/6ade86a59073e297/original/ADM-G7-U7-04-TE-CA.pdf#page=4)) * 7.03 ([Activity 3, entire Monitor and Connect sections, pages 666–667](https://learning.amplify.com/m/75b0c0ea244319fc/original/ADM-G7-U7-03-TE-CA.pdf#page=6)) * 7.02 ([Activity 2, Monitor, Screen 6 Differentiation, and entire Connect section, page 659](https://learning.amplify.com/m/e289001ba679207/original/ADM-G7-U7-02-TE-CA.pdf#page=6)) |  |  |  |
| 7.G.6 | Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | *Solve real-world involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.*  **Student Edition**   * 7.13 ([Warm-Up, Screen 1: click a response for part a to view part b](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d21186?collections=68078c6c907aef8d98d18584#preview/cb0e1136-9839-440d-95d9-36f61a226377)) * 7.13 ([Activities 1–3, Screens 2–9](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d21186?collections=68078c6c907aef8d98d18584#preview/b99f912b-8ac1-4ed9-876a-c52bfa8258e9)) * 7.13 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d21186?collections=68078c6c907aef8d98d18584#preview/c087d612-ba58-4f84-9341-aaba72c16196)) * 7.13 ([Practice, Screens 1–5, Problems 1–6](https://teacher.desmos.com/activitybuilder/custom/68078c6f907aef8d98d269d7?collections=68078c6c907aef8d98d18584%2C68078c6e907aef8d98d2317b#preview/46a4e855-65a7-4324-87d1-ae411af114de))   **Teacher Edition**   * 7.13 ([Activity 1, entire Monitor and Connect sections, page 744](https://learning.amplify.com/m/72c3bda564159a7d/original/ADM-G7-U7-13-TE-CA.pdf#page=4)) * 7.13 ([Activity 2, entire Monitor and Connect sections, including the Key Takeaway, page 745](https://learning.amplify.com/m/72c3bda564159a7d/original/ADM-G7-U7-13-TE-CA.pdf#page=5))   *Solve mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.*  **Student Edition**   * 7.10 ([Warm-Up and Activities 1–2, Screens 1–10](https://teacher.desmos.com/activitybuilder/custom/68078c6d907aef8d98d1f711?collections=68078c6c907aef8d98d18584#preview/535f3fa9-0d7e-4900-b5f4-7292e6f59dea)) * 7.11 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d2018d?collections=68078c6c907aef8d98d18584#preview/3088311c-a754-4e06-9d3f-18083b40f443)) * 7.11 ([Activity 2, Screens 6–8](https://teacher.desmos.com/activitybuilder/custom/68078c6e907aef8d98d2018d?collections=68078c6c907aef8d98d18584#preview/77d0ba06-0618-4f68-9d28-b304ce058fb1)) * 7.12 ([Warm-Up and Activities 1–2, Problems 1–5, pages 736–739](https://learning.amplify.com/m/14a8bacca9e84758/original/ADM-G7-U7-12-SE-lesson-answer-key-CA.pdf))   **Teacher Edition**   * 7.10 ([Activity 2, entire Monitor and Connect sections, pages 724–725](https://learning.amplify.com/m/14ce7e6682c07add/original/ADM-G7-U7-10-TE-CA.pdf#page=5)) * 7.12 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 740](https://learning.amplify.com/m/2a380fd3a79b7163/original/ADM-G7-U7-12-TE-CA.pdf#page=7)) * 7.11 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 733](https://learning.amplify.com/m/4c7d67779266e77/original/ADM-G7-U7-11-TE-CA.pdf#page=7)) |  |  |  |

### Domain: Statistics and Probability

##### Cluster: Use random sampling to draw inferences about a population.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in **Unit 8**. Students explore techniques for gathering samples, recognizing that random sampling typically produces data representative of the population. They use sampling data to make inferences about populations. Students use simulations to generate multiple samples of the same size and determine whether they have measures of center and variation that are alike or different.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.SP.1 | Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. | *Understand that statistics can be used to gain information about a population by examining a sample of the population.*  **Student Edition**   * 8.10 ([Activities 1–2, Screens 2–7](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2f1d5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/e8bb6417-abc6-44c8-a158-1f99c04b6e76)) * 8.10 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2f1d5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/5556c3b5-0c83-4006-8467-cbf047a8f467)) * 8.15 ([Activity 1, Problems 3–5, page 869](https://learning.amplify.com/m/4938f0ec8a4c6a81/original/ADM-G7-U8-15-SE-lesson-answer-key-CA.pdf#page=2))   **Teacher Edition**   * 8.10 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, page 834](https://learning.amplify.com/m/d76b90434d43ff2/original/ADM-G7-U8-10-TE-CA.pdf#page=5)) * 8.10 ([Activity 2, Connect, paragraph that begins with “Consider asking:”, page 835](https://learning.amplify.com/m/d76b90434d43ff2/original/ADM-G7-U8-10-TE-CA.pdf#page=6))   *Generalizations about a population from a sample are valid only if the sample is representative of that population.*  **Student Edition**   * 8.11 ([Warm-Up and Activities 1–2, Screens 1–8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2fba3?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/77e9111d-1300-47f9-8fe4-994ffc5a088f)) * 8.11 ([entire Summary section, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2fba3?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/b7bb5a3d-837b-4cac-83d1-fcec28883283)) * 8.15 ([Activity 1, Problem 6, page 870](https://learning.amplify.com/m/4938f0ec8a4c6a81/original/ADM-G7-U8-15-SE-lesson-answer-key-CA.pdf#page=3)) * Unit 8 ([Practice Day 2, Activity Sheet: Task C](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf#page=3))   **Teacher Edition**   * 8.11 ([Warm-Up, entire Connect section, page 840](https://learning.amplify.com/m/74248a5f10f97c62/original/ADM-G7-U8-11-TE-CA.pdf#page=3)) * 8.11 ([Activity 2, entire Connect section, including the Key Takeaway, page 843](https://learning.amplify.com/m/74248a5f10f97c62/original/ADM-G7-U8-11-TE-CA.pdf#page=6))   *Understand that random sampling tends to produce representative samples and support valid inferences.*  **Student Edition**   * 8.12 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d3029b?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/0437a813-f189-44b4-a4b0-620fe7079388)) * 8.11 ([Activity 2, Screen 8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2fba3?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/f48dafd8-da8f-4d37-b47a-f41fe2df16de)) * 8.11 ([Show What You Know, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2fba3?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/10d189f9-b9b1-4ec9-b218-af4f441c3100))   **Teacher Edition**   * 8.11 ([entire Synthesis section and Lesson Takeaway, page 844](https://learning.amplify.com/m/74248a5f10f97c62/original/ADM-G7-U8-11-TE-CA.pdf#page=7)) * 8.10 ([entire Synthesis section and Lesson Takeaway, page 837](https://learning.amplify.com/m/d76b90434d43ff2/original/ADM-G7-U8-10-TE-CA.pdf#page=8)) |  |  |  |
| 7.SP.2 | Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. | *Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.*  **Student Edition**   * 8.12 ([Activities 1–2, Screens 3–9](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d3029b?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/d2cd3054-9b40-4ee1-bade-2527b3bac41d)) * 8.13 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d30a51?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/ff81922c-36d0-4f50-bb1b-d298485f455d)) * Unit 8 ([Practice Day 2, Activity Sheet: Task B, Problems 4–5](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf#page=2) and [Task C, Problems 2–3](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf#page=3))   **Teacher Edition**   * 8.12 ([Activity 1, entire Monitor section, page 848](https://learning.amplify.com/m/182765651be620c7/original/ADM-G7-U8-12-TE-CA.pdf#page=4)) * 8.13 ([Activity 2, entire Launch section, page 857](https://learning.amplify.com/m/3a6ef37abbecf03/original/ADM-G7-U8-13-TE-CA.pdf#page=6))   *Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.*  **Student Edition**   * 8.13 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d30a51?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/ff81922c-36d0-4f50-bb1b-d298485f455d)) * 8.13 ([Show What You Know, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d30a51?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/65452405-dcc1-4ad3-be74-38afac633ee6)) * 8.15 ([Activities 1–2, Problems 7–8, pages 870–871](https://learning.amplify.com/m/4938f0ec8a4c6a81/original/ADM-G7-U8-15-SE-lesson-answer-key-CA.pdf#page=3) and [Screens 4–7](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d38794?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/f0719dcc-3dfc-4edc-9870-3a1a40e6a105)) * 8.12 ([Activity 1, Screens 4–6](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d3029b?collections=68078c70907aef8d98d29adf#preview/09498f0b-3852-4bad-87c0-a4358143fe50))   **Teacher Edition**   * 8.13 ([Activity 1, Connect, paragraph that begins with “To surface the Key Takeaway”, and the Key Takeaway, page 856](https://learning.amplify.com/m/3a6ef37abbecf03/original/ADM-G7-U8-13-TE-CA.pdf#page=5)) |  |  |  |

##### 

##### Cluster: Draw informal comparative inferences about two populations.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in **Unit 8**. Students analyze two data distributions with similar variabilities. They come to recognize that when the centers of two data distributions are greater than 1 mean absolute deviation apart, the visual separation is more noticeable. Students calculate measures of center and measures of variability for data collected by random sampling methods and use those measures to make comparative inferences about two populations.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.SP.3 | Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. | *Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.*  **Student Edition**   * 8.13 ([Activities 1–2, Screens 6–7](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d30a51?collections=68078c70907aef8d98d29adf#preview/e774252b-a086-48a2-b000-10513bdfca5a), and [Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d30a51?collections=68078c70907aef8d98d29adf#preview/a7491fe1-78dc-465d-8d3e-a8bcef59ae0c)) * 8.14 ([Activities 1–2, Problems 2–7, pages 862–864](https://learning.amplify.com/m/5891da970ed37aec/original/ADM-G7-U8-14-SE-lesson-answer-key-CA.pdf#page=2)) * Unit 8 ([Practice Day 2, Activity Sheet: Task B, Problem 4](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf#page=2) and [Task D, Problems 2–3](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf#page=4))   **Teacher Edition**   * 8.14 ([Activity 1, entire Monitor and Connect sections, including the Key Takeaway, pages 862–863](https://learning.amplify.com/m/5f8074b51241bfd8/original/ADM-G7-U8-14-TE-CA.pdf#page=4) and [Screens 3–4](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d310e0?collections=68078c70907aef8d98d29adf#preview/3b821d07-8dc8-45c3-bc6a-9f1af4d95e0d)) |  |  |  |
| 7.SP.4 | Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. | *Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.*  **Student Edition**   * 8.09 ([Activities 2–3, Problems 9–10, pages 827–828](https://learning.amplify.com/m/2eace3b45275dc31/original/ADM-G7-U8-09-SE-lesson-answer-key-CA.pdf#page=3)) * 8.14 ([Activity 1, Problems 2, 4–5, pages 862–863](https://learning.amplify.com/m/5891da970ed37aec/original/ADM-G7-U8-14-SE-lesson-answer-key-CA.pdf#page=2)) * 8.14 ([entire Summary section, page 865](https://learning.amplify.com/m/4aef08c62de6a0d5/original/ADM-G7-U8-14-SE-practice-answer-key-CA.pdf)) * 8.13 ([Practice, Screens 1–2, Problems 1–2](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d3655b?collections=68078c70907aef8d98d29adf%2C68078c72907aef8d98d32e91#preview/defb2654-5dd7-4e33-8d64-02ef3e3c1125))   **Teacher Edition**   * 8.14 ([entire Synthesis section, Lesson Takeaway, and Image of Summary Student Edition, page 865](https://learning.amplify.com/m/5f8074b51241bfd8/original/ADM-G7-U8-14-TE-CA.pdf#page=7)) |  |  |  |

##### Cluster: Investigate chance processes and develop, use, and evaluate probability models.

How does the program address this aspect of the domain?

Amplify Desmos Math California addresses this aspect of the domain in **Unit 8**. Students develop beginning probability concepts and connect numbers between 0 and 1 as ways to describe the likelihood of events occurring. They use repeated experiments and proportional reasoning to predict the contents of a mystery bag, recognizing that the number of repeated experiments affects the accuracy of their prediction. Students run experiments and calculate probabilities in which all of the outcomes are equally likely. They run experiments and calculate probabilities using spinners, coins, and number cubes, in which not all of the outcomes are equally likely. Through the context of fair games, students connect their understanding of the probability of a simple event to the probability of a compound event. They use organized lists, tables, and tree diagrams to represent sample spaces for compound events. Students design and run simulations that represent compound events relating to weather forecasts, blood types, and other contexts. They understand probability as a ratio of the number of outcomes desired to the total number of outcomes in the sample space. To predict the contents of a mystery bag, students connect the unit rate (constant of proportionality) to probability experiments. Students use proportional reasoning to compare probabilities from a model to the results of repeated experiments. They use proportional reasoning to make predictions and estimates about a population from random samples.

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 7.SP.5 | Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. | *Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near zero indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near one indicates a likely event.*  **Student Edition**   * 8.02 ([Warm-Up and Activities 1–2, Screens 1–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/450096c6-f2a9-40a1-8f11-35b024582543)) * 8.02 ([Activity 3, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/fd81197d-f708-4237-b228-2c80f9d02b19)) * 8.02 ([Show What You Know, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/f279ef1d-8e02-4b73-8d13-824d00b487e2)) * 8.02 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/2b7b3f12-0e24-4299-a33f-bd9984c104ed)) * 8.01 ([Warm-Up and Activity 1, Problems 1–10, pages 761–763](https://learning.amplify.com/m/4e3cef0925f3b72f/original/ADM-G7-U8-01-SE-lesson-answer-key-CA.pdf) and [Screens 2–6](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37807?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/0e8f78a3-e212-4b8d-a9e4-2f9474b438bc))     **Teacher Edition**   * 8.02 ([Activity 1, entire Monitor and Connect sections, page 769](https://learning.amplify.com/m/7b07e6966bacd968/original/ADM-G7-U8-02-TE-CA.pdf#page=5)) * 8.02 ([Activity 3, entire Connect section, page 772](https://learning.amplify.com/m/7b07e6966bacd968/original/ADM-G7-U8-02-TE-CA.pdf#page=8)) * 8.01 ([Activity 1, entire Connect section, including the Key Takeaway, page 763](https://learning.amplify.com/m/f4d554efcf129d7/original/ADM-G7-U8-01-TE-CA.pdf#page=5)) |  |  |  |
| 7.SP.6 | Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. | *Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency.*  **Student Edition**   * 8.04 ([Activity 1, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/aebbe894-1169-42ff-bbac-aff04552546b)) * 8.04 ([Show What You Know, Screen 11](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/ad34c83e-662e-48f1-8e1e-26c394ce6b59)) * 8.03 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2b17f?collections=68078c70907aef8d98d29adf#preview/5e9b6af0-0d52-4af1-9747-64b14e628563)) * 8.03 ([Activity 2, Screens 7–9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2b17f?collections=68078c70907aef8d98d29adf#preview/d60ac4fb-31d0-4e1c-a7e8-c5ac9355354b)) * 8.05 ([Activity 1, Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f0ffb479-43c4-40e6-920f-60b4535b0506)) * 8.05 ([Show What You Know, Screen 13](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/b750faf4-aa3f-4514-a9a8-a25080bed9ad))     **Teacher Edition**   * 8.03 ([Activity 1, Monitor, paragraph that begins with “To support students getting started”, page 777](https://learning.amplify.com/m/12bde4dbdb8b1838/original/ADM-G7-U8-03-TE-CA.pdf#page=4))     *Predict the approximate relative frequency given the probability.*  **Student Edition**   * 8.04 ([Activity 2, Screen 7](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/de76222e-34b5-4dae-bdc9-d5b45bc26aaa)) * 8.04 ([Synthesis, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/140e084a-060e-4fe6-876e-a49d7db05911)) * 8.03 ([Warm-Up, Screen 1](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2b17f?collections=68078c70907aef8d98d29adf#preview/ff82a1fc-f108-44c2-b06a-91d127279647)) * 8.05 ([Activity 2, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f04b08b6-695d-445d-9f59-a8dd5f875517))         **Teacher Edition**   * 8.04 ([Activity 1, Connect, paragraphs that begin with “Display student responses” and “Invite students”, and the Key Takeaway, page 786](https://learning.amplify.com/m/bd991062b09795b/original/ADM-G7-U8-04-TE-CA.pdf#page=5)) |  |  |  |
| 7.SP.7a | Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. | *Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.*  **Student Edition**   * 8.02 ([Activity 3, Screens 9–11](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/35065db3-cd59-42d0-b247-f0e8b90c8125)) * 8.04 ([Activity 1, Screens 2–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/47c28654-49ad-4660-bc9d-a497459d6e6a)) * 8.05 ([Activity 1, Screen 4 and Play the animation](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/b5de2ac1-7ea2-4264-bdc6-5fe300097f66), and [Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f0ffb479-43c4-40e6-920f-60b4535b0506)) * 8.05 ([Activity 2, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f04b08b6-695d-445d-9f59-a8dd5f875517)) * 8.05 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/3cbbbb1b-408d-4ce8-b7b5-e27b2a18b9d4))     **Teacher Edition**   * 8.04 ([Activity 1, Monitor, Differentiation, and entire Connect section, including the Key Takeaway, page 786](https://learning.amplify.com/m/bd991062b09795b/original/ADM-G7-U8-04-TE-CA.pdf#page=5)) * 8.05 ([Activity 1, entire Connect section, including the Key Takeaway, page 794](https://learning.amplify.com/m/7db71a2eeb72b654/original/ADM-G7-U8-05-TE-CA.pdf#page=5))                   *Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.*  **Student Edition**   * 8.02 ([Warm-Up, Screen 1](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/450096c6-f2a9-40a1-8f11-35b024582543)) * 8.02 ([Activities 1–2, Screens 3](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/ffbffac0-de70-403b-a3c2-1f1220667b88), and [5–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/78e5c524-765a-4eba-9598-fd621d818cfd)) * 8.02 ([Activity 3, Screens 10–11](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/fd81197d-f708-4237-b228-2c80f9d02b19)) * Unit 8 ([Practice Day 2, Activity Sheet: Task A, Problems 1–4](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf)) * 8.02 ([Practice, Screens 3–4, Problems 6 and 9, middle row of each table](https://teacher.desmos.com/activitybuilder/custom/68078c72907aef8d98d3353f?collections=68078c70907aef8d98d29adf%2C68078c72907aef8d98d32e91#preview/a2ad65cf-03b6-45d8-a7a0-ae443c0b0bd7))     **Teacher Edition**   * 8.02 ([Activity 2, entire Connect section, page 770](https://learning.amplify.com/m/7b07e6966bacd968/original/ADM-G7-U8-02-TE-CA.pdf#page=6)) |  |  |  |
| 7.SP.7b | Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. | *Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.*  **Student Edition**   * 8.02 ([Activity 3, Screens 9–11](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2a9af?collections=68078c70907aef8d98d29adf#preview/35065db3-cd59-42d0-b247-f0e8b90c8125)) * 8.04 ([Activity 1, Screens 2–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/47c28654-49ad-4660-bc9d-a497459d6e6a)) * 8.05 ([Activity 1, Screen 4 and Play the animation](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/b5de2ac1-7ea2-4264-bdc6-5fe300097f66), and [Screens 5–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f0ffb479-43c4-40e6-920f-60b4535b0506)) * 8.05 ([Activity 2, Screen 9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/f04b08b6-695d-445d-9f59-a8dd5f875517)) * 8.05 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/3cbbbb1b-408d-4ce8-b7b5-e27b2a18b9d4))     **Teacher Edition**   * 8.04 ([Activity 1, Monitor, Differentiation, and entire Connect section, including the Key Takeaway, page 786](https://learning.amplify.com/m/bd991062b09795b/original/ADM-G7-U8-04-TE-CA.pdf#page=5)) * 8.05 ([Activity 1, entire Connect section, including the Key Takeaway, page 794](https://learning.amplify.com/m/7db71a2eeb72b654/original/ADM-G7-U8-05-TE-CA.pdf#page=5))     *Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.*  **Student Edition**   * 8.05 ([Activity 1, Screens 3–6](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/498e9a37-eba4-4c1d-8c72-ebbdd9f78494)) * 8.05 ([Activity 2, Screens 8–9](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2c4db?collections=68078c70907aef8d98d29adf#preview/3d216265-f330-42ff-87aa-851923bac7c1)) * 8.04 ([Activity 1, Screens 4–5](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/a7cbb7a0-d775-4e12-b992-c6b20178de6f)) * 8.04 ([Activities 2–3 and Synthesis, Screens 8–10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2bb9b?collections=68078c70907aef8d98d29adf#preview/81343a10-4bf9-4664-9d02-f86b2ba66e21)) * 8.04 ([Practice, Screen 5, Problem 6](https://teacher.desmos.com/activitybuilder/custom/68078c72907aef8d98d33d33?collections=68078c70907aef8d98d29adf%2C68078c72907aef8d98d32e91#preview/04629dfc-7621-4fcf-aca6-b59fac36eba7))     **Teacher Edition**   * 8.05 ([Activity 1, Monitor, paragraph that begins with “Pause”, page 793](https://learning.amplify.com/m/7db71a2eeb72b654/original/ADM-G7-U8-05-TE-CA.pdf#page=4)) * 8.05 ([Activity 2, entire Connect section, page 796](https://learning.amplify.com/m/7db71a2eeb72b654/original/ADM-G7-U8-05-TE-CA.pdf#page=7)) |  |  |  |
| 7.SP.8a | 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. | *Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.*  **Student Edition**   * 8.06 ([Activities 1–2, Screens 4–10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/5ec24cae-b7e5-42b1-8a69-60f8160ca20c)) * 8.07 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8acb4170-44c2-4fab-93e7-70aeceb3f94c)) * 8.07 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8711ad30-992f-433e-a240-f3d8bb01033c)) * 8.08 ([Activities 1–2, Problems 2–4, pages 817–818](https://learning.amplify.com/m/29a78234eba286a0/original/ADM-G7-U8-08-SE-lesson-answer-key-CA.pdf#page=2), [Activity 1 Sheet](https://learning.amplify.com/m/7d360fa77ee82f0b/original/ADM-G7-U8-08-sheet-CA.pdf), and [Screens 2–3](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe))       **Teacher Edition**   * 8.06 ([Activity 1, entire Connect section, including the Key Takeaway, page 802](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=5)) * 8.07 ([Activity 1, entire Launch and Connect sections, including the Key Takeaway, page 809](https://learning.amplify.com/m/3c6b914383037a9f/original/ADM-G7-U8-07-TE-CA.pdf#page=4))     *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.*  **Student Edition**   * 8.06 ([Warm-Up, Screen 2, and click on the Sample Responses tab](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c70907aef8d98d29adf#preview/6593361c-c032-4970-8d56-bbd9dff27e84)) * 8.06 ([Activity 1, Screens 4–7](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c70907aef8d98d29adf#preview/5ec24cae-b7e5-42b1-8a69-60f8160ca20c)) * 8.06 ([Activity 2, Screen 10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c70907aef8d98d29adf#preview/55e76758-b312-41ee-9cea-5467aa77680b)) * Unit 8 ([Practice Day 2, Activity Sheet: Task A](https://learning.amplify.com/m/77a6d0c0fb6964a3/original/ADM-G7-U8-practice-day-2-cards-CA.pdf)) * 8.06 ([Practice, Screen 3, Problem 5](https://teacher.desmos.com/activitybuilder/custom/68078c72907aef8d98d346aa?collections=68078c70907aef8d98d29adf%2C68078c72907aef8d98d32e91#preview/fb061a60-1d1c-42ec-bf55-346efe317d8d)) * 8.06 ([Practice, Screens 7–8, Problems 9–11](https://teacher.desmos.com/activitybuilder/custom/68078c72907aef8d98d346aa?collections=68078c70907aef8d98d29adf%2C68078c72907aef8d98d32e91#preview/fdabb3f0-1866-4c2a-b553-3dc3eac47453))     **Teacher Edition**   * 8.06 ([Warm-Up, entire Connect section, including the Key Takeaway, page 800](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=3)) |  |  |  |
| 7.SP.8b | Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language, identify the outcomes in the sample space which compose the event. | *Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams.*  **Student Edition**   * 8.06 ([Activities 1–2, Screens 4–10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/5ec24cae-b7e5-42b1-8a69-60f8160ca20c)) * 8.07 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8acb4170-44c2-4fab-93e7-70aeceb3f94c)) * 8.07 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8711ad30-992f-433e-a240-f3d8bb01033c)) * 8.08 ([Activities 1–2, Problems 2–4, pages 817–818](https://learning.amplify.com/m/29a78234eba286a0/original/ADM-G7-U8-08-SE-lesson-answer-key-CA.pdf#page=2), [Activity 1 Sheet](https://learning.amplify.com/m/7d360fa77ee82f0b/original/ADM-G7-U8-08-sheet-CA.pdf), and [Screens 2–3](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe))     **Teacher Edition**   * 8.06 ([Activity 1, entire Connect section, including the Key Takeaway, page 802](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=5)) * 8.07 ([Activity 1, entire Launch and Connect sections, including the Key Takeaway, page 809](https://learning.amplify.com/m/3c6b914383037a9f/original/ADM-G7-U8-07-TE-CA.pdf#page=4))     *For an event described in everyday language, identify the outcomes in the sample space which compose the event.*  **Student Edition**   * 8.06 ([Warm-Up and Activity 1, Screens 1–5](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c70907aef8d98d29adf#preview/d04b4a01-2677-484f-848a-98eeb3829a31))     **Teacher Edition**   * 8.06 ([Activity 1, Monitor, paragraphs that begin with “To support making connections” and “Consider asking”, page 801](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=4)) |  |  |  |
| 7.SP.8c | Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Design and use a simulation to generate frequencies for compound events. | *Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.*  **Student Edition**   * 8.06 ([Activities 1–2, Screens 4–10](https://teacher.desmos.com/activitybuilder/custom/68078c70907aef8d98d2ceb5?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/5ec24cae-b7e5-42b1-8a69-60f8160ca20c)) * 8.07 ([Activity 1, Screens 2–4](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8acb4170-44c2-4fab-93e7-70aeceb3f94c)) * 8.07 ([Activity 2, Screens 7–8](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c56907aef8d98cb768d%2C68078c70907aef8d98d29adf#preview/8711ad30-992f-433e-a240-f3d8bb01033c)) * 8.08 ([Activities 1–2, Problems 2–4, pages 817–818](https://learning.amplify.com/m/29a78234eba286a0/original/ADM-G7-U8-08-SE-lesson-answer-key-CA.pdf#page=2), [Activity 1 Sheet](https://learning.amplify.com/m/7d360fa77ee82f0b/original/ADM-G7-U8-08-sheet-CA.pdf), and [Screens 2–3](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe))     **Teacher Edition**   * 8.06 ([Activity 1, entire Connect section, including the Key Takeaway, page 802](https://learning.amplify.com/m/58af61c9aa458530/original/ADM-G7-U8-06-TE-CA.pdf#page=5)) * 8.07 ([Activity 1, entire Launch and Connect sections, including the Key Takeaway, page 809](https://learning.amplify.com/m/3c6b914383037a9f/original/ADM-G7-U8-07-TE-CA.pdf#page=4))     *Design and use a simulation to generate frequencies for compound events.*  **Student Edition**   * 8.07 ([Activity 3, Screens 9–11](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c70907aef8d98d29adf#preview/deeaa686-b03f-49f5-8ad4-5a31b54cd601)) * 8.07 ([entire Summary section, Screen 15](https://teacher.desmos.com/activitybuilder/custom/68078c71907aef8d98d2d91d?collections=68078c70907aef8d98d29adf#preview/e80b4212-cf14-484e-8848-be352373d04b)) * 8.08 ([Activities 1–2, Problems 2–4, pages 817–818](https://learning.amplify.com/m/29a78234eba286a0/original/ADM-G7-U8-08-SE-lesson-answer-key-CA.pdf#page=2), [Activity 1 Sheet](https://learning.amplify.com/m/7d360fa77ee82f0b/original/ADM-G7-U8-08-sheet-CA.pdf), and [Screens 2–3](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe)) * Unit 8 ([Practice Day 1, Task Cards: Task D](https://learning.amplify.com/m/297bb5678642b9af/original/ADM-G7-U8-practice-day-1-cards-CA.pdf#page=4))     **Teacher Edition**   * 8.07 ([Activity 3, entire Launch, Monitor, and Connect sections, page 812](https://learning.amplify.com/m/3c6b914383037a9f/original/ADM-G7-U8-07-TE-CA.pdf#page=7)) * 8.08 ([Activity 1, entire Launch, Monitor, and Connect sections, page 817](https://learning.amplify.com/m/67c49101689ae70e/original/ADM-G7-U8-08-TE-CA.pdf#page=4) and [Screen 2](https://teacher.desmos.com/activitybuilder/custom/68078c73907aef8d98d37d44?collections=68078c70907aef8d98d29adf%2C68078c73907aef8d98d3772b#preview/59c0d557-065a-48e0-884a-e39fc40257fe)) |  |  |  |

**Appendix:** (*Publisher/Developer, please enter any additional notes regarding the standards below.)*

California Department of Education, November 2023

1. The California Common Core State Standards: Mathematics were adopted by the State Board of Education on August 2, 2010, (and modified pursuant to Senate Bill 1200 on January 16, 2013). This standards map is organized by Big Idea and Content Connections in alignment with the *Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve*, approved by the State Board of Education on July 12, 2023. [↑](#footnote-ref-0)
2. Computations with rational numbers extend the rules for manipulating fractions to complex fractions. [↑](#footnote-ref-1)