DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

Cover Page for 6th Grade Math Scope and Sequence

The purpose of this document is to clarify the intentions of this Scope and Sequence (SAS) and to provide a window into the thinking behind the choices made. If you have further questions, concerns, and/or ideas, please reach out to Camsie McAdams, Director of STEM. We are excited to make our math work exemplary throughout the district!

PLEASE NOTE THAT STANDARDS APPEARING IN BOLD IN THE SAS DOCUMENTS ARE CONSIDERED MAJOR FOCUS STANDARDS (guidance from PARCC).

1. **What is our main focus in each unit?**

Unit 1.1 – Geometry: Area of triangles, special quadrilaterals, and polygons; represent three-dimensional figures using nets; find the volume of a right rectangular prism, draw polygons in the coordinate plane given coordinates for the vertices

Unit 1.2 – Number Systems: Extending the Number System: number lines, coordinate planes, understanding number placement

Unit 2.1 – Expressions & Equations: Algebraic and Equivalent Expressions: write, read, and evaluate expressions, applying the properties of operations to generate equivalent expressions

Unit 2.2 – Expressions & Equations: Application and Problem Solving: understand solving equation or inequality as a process of answering a question

Unit 3.1 – Expressions & Equations: Writing and Solving Equations and Inequalities: write an inequality of the form $x > c$ or $x < c$ to represent solutions of such inequalities on number line diagrams

Unit 3.2 – Statistics and Probability: Representing Data and Data Distributions: recognize statistical questions, understanding data, display numerical data in plots on a number line, measures of central tendency, measures of variation

Unit 4.1 – Ratios & Proportional Relationships: Understanding Ratios and Rates: understand the concept of a ratio and use ratio language to describe ratio relationship between two quantities, understand the concept of a unit rate

Unit 4.2 – Ratio & Proportional Relationships: Application of Ratios and Rates: Use ratio and rate reasoning to solve real-world and mathematical problems

Unit 5.1 – Strategic Re-teaching and Review to prepare for DC CAS

Unit 6.1 – Bridge to 7^{th} grade: Understanding Positive and Negative Rational Numbers and Operations: Review of 6.NS.6 and 6.NS.7, presentation of 7.NS.1 – apply and extend previous understanding of addition and subtraction to add and subtract rational numbers

2. **What am I supposed to teach and do in unit 5.1?**

Unit 5 is meant to be a 10-day focused reviewing and re-teaching opportunity to help students feel prepared for success on the DC-CAS. Use the data you have gathered about your students' understanding (journals, anecdotal records, PIA data, in-class quizzes, etc…) to strategically plan ways to address your students' needs. Incorporating whole group re-teaching as well as small-group and individualized instruction should comprise your instructional plan during this window.

3. **What am I supposed to teach and do in unit 6.1?**

The sixth instructional window is meant to be a bridge from one grade level to the next. We have selected some of the priority standards from this grade and linked them to similar standards in the upcoming one in order to prepare our students for their next steps. Additionally, this is the time to really ensure all students have mastered the fluency standards and the major foci for this grade level.

4. **How can I incorporate the routine/ fluency standards since they happen throughout the year?**

Fluently computing with all four operations, as well as identifying patterns in numbers are skills you can incorporate in daily morning meetings or morning/math messages. For example, by having a "Mad Math Minute" that requires students to mentally create factor families, compare fractions, etc., children can flexibly consider how numbers work. Children will also develop this fluency through repeated exposure, practice, and discussion. Using fraction strips, fraction tiles or other manipulative tools are a great way to incorporate this skill in a fun practice.

5. **How can I incorporate the Standards for Mathematical Practice and why are only 2-3 underlined in each Instructional Unit?**

While the Standards for Mathematical Practice are not necessarily content-specific, we felt that some were better aligned to each unit. These standards should drive your pedagogical work every day. They are "habits of mind" that permeate the way we think and act on a daily basis. We recommend naming these with your students (although putting them in kid-friendly language may help at this age), so that the standards become part of your classroom's norms.

6. **What role does assessment play in my math instruction?**

Formative (on-going) assessments are an important part of instruction at every grade level. We strongly encourage you to take anecdotal notes on what your students are doing, saying, figuring out, and moving towards on a daily basis (at least for a few students per day). Building this type of work into your practice as a routine will make it seem less daunting and will also provide you with valuable information to inform your instruction – whether it be for your class, for a small group, or for individual students.

7. **What does it really mean to have "real world applications"? Can I just use word problems in my instruction?**

This is an interesting question! We encourage you to have conversations with colleagues about "school math" versus "real world" applications. Are we writing word problems for word problems' sake or are we really asking students to apply concepts at a deeper level? For example, giving students the problem, "The ratio of boys to girls in the school is 4:5. If there are 87 boys how many girls attend the school?" is more of a "school math" problem. We may not need to figure this out in our "real life". However, if we consider the proportional representation system associated with the Presidential election, students can connect the mathematics of ratios and proportions to a real world situation.

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First Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
August 27 – October 11 Paced Interim Assessment: October 10th, 11th Instructional Days: 32 days (including testing)	**1.1 Geometry** Approximate number of instructional days: 15 days	**6.G.1.** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems. **6.G.4.** Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. **6.G.2.** Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\ w\ h$ and $V = b\ h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. **6.G.3.** Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
	1.2 Number Systems: Extending the Number System Approximate number of instructional days: 15 days	*Note: The Number Systems Unit has been split into three components to provide clear guidance regarding the instructional sequence of concepts. Teachers should modify the pace of the entire Number System unit to meet the needs of students in achieving mastery and fluency.* **6.NS.6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.** **a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.** **6.NS.5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts,**

		explaining the meaning of 0 in each situation.
		6.NS.7. Understand ordering and absolute value of rational numbers. **a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*** **b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 °C > –7 °C to express the fact that –3 °C is warmer than –7 °C.*** **c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*** **d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.***
		6.NS.6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. **b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.** **c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.** **6.NS.8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.**
		Routine/Fluency Standards: **6.NS.1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cupservings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mile and area 1/2 square miles?***

		6.NS.3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. **6.NS.4.** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

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Second Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
October 12 – December 5 Paced Interim Assessment: December 4th, 5th Instructional Days: 34 days (including testing)	**2.1 Expressions & Equations: Algebraic and Equivalent Expressions** Approximate number of instructional days: 16 days	**6.EE.2.** Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.* b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.* **6.EE.3. Apply the properties of operations to generate equivalent expressions.** ***For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.*** **6.EE.4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).** ***For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for. Reason about and solve one-variable equations and inequalities.*** **6.EE.1. Write and evaluate numerical expressions involving whole-number exponents.**

	2.2 Expressions & Equations: Application and Problem Solving Approximate number of instructional days: 16 days	**6.EE.5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.** **6.EE.6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.** **6.EE.2. Write, read, and evaluate expressions in which letters stand for numbers.** **c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).** ***For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.*** **6.EE.7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.** **6.EE.9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.** ***For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.***
		Routine/Fluency Standards: **6.NS.1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.** ***For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mile and area 1/2 square miles?*** **6.NS.2.** Fluently divide multi-digit numbers using the standard algorithm.

		6.NS.3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. **6.NS.4.** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

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Third Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
December 6 – February 6 Paced Interim Assessment: February 5th, 6th Instructional Days: 33 days (including testing)	**3.1 Expressions & Equations: Writing and Solving Equations and Inequalities** Approximate number of instructional days: 14 days	**6.EE.5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.** **6.EE.8. Write an inequality of the form *x* > *c* or *x* < *c* to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form *x* > *c* or *x* < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.**
	3.2 Statistics and Probability: Representing Data and Data Distributions Approximate number of instructional days: 17 days	**6.SP.1.** Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.* **6.SP.2.** Understand that a set of data collected to answer a statistical question has a distribution, which can be described by its center, spread, and overall shape. **6.SP.4.** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. **6.SP.3.** Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. **6.SP.5.** Summarize numerical data sets in relation to their context, such as by: **a.** Reporting the number of observations. **b.** Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. **c.** Giving quantitative measures of center (median and/or mean) and variability (inter-quartile range and/or mean

		absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. **d.** Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.
		Routine/Fluency Standards: **6.NS.1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.** ***For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cupservings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*** **6.NS.2.** Fluently divide multi-digit numbers using the standard algorithm. **6.NS.3.** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. **6.NS.4.** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

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Fourth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
February 7 – March 29 Paced Interim Assessment: March 27th, 28th Instructional Days: 34 days (including testing)	**4.1 Ratios & Proportional Relationships: Understanding Ratios and Rates** Approximate number of instructional days: 16 days	*Note: To ensure that students properly master the Ratios and Proportional Relationships units, it is critical that students have demonstrated mastery in the fluency standards, especially 6.NS.1. and 6.NS.4. If this is not the case, please build remedial instructional time into these units.* **6.RP.1.** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."* **6.RP.2.** Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."** **Expectations for unit rates in this grade are limited to non-complex fractions*

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	4.2 Ratios & Proportional Relationships: Application of Ratios and Rates Approximate number of instructional days: 16 days	**6.RP.3.** Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?* c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving the whole, given a part and the percent.

		Routine/Fluency Standards: **6.NS.1.** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cupservings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?* **6.NS.2.** Fluently divide multi-digit numbers using the standard algorithm. **6.NS.3.** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. **6.NS.4.** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

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Fifth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
April 8 to May 3 **DC-CAS April 22-May 2** Instructional Days: 18 days	**5.1 Strategic Re-teaching and Review** Approximate number of instructional days: 18 days	Identified standards based on PIA data and other sources.

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Sixth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
May 6 to June 20 Paced Interim Assessment: June 5th, 6th Instructional Days: 32 days	**6.1 Bridge to 7th grade: Understanding Positive and Negative Rational Numbers and Operations** Approximate number of instructional days: 30 days	**6.NS.6.** Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite. **6.NS.7. Understand ordering and absolute value of rational numbers.** **c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*** **d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*** **6.NS.8.** Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate. **7.NS.1. 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.** **a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.** **b. 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.** **c. 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.**

		d. Apply properties of operations as strategies to add and subtract rational numbers
		Routine/Fluency Standards: **6.NS.1.** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cupservings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mile and area 1/2 square miles?* **6.NS.3.** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. **6.NS.4.** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).

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		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.