

Unit 2: The Number System

Content Area: **Mathematics**
Course(s): **Math - Grade 7**
Time Period: **1st Marking Period**
Length: **8 Weeks**
Status: **Published**

Unit Overview

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

Use negative integers in everyday contexts that involve values below zero. Add, subtract, multiply, and divide integers.

Use properties of operations to generate equivalent expressions.

Solve multi-step real-life problems by performing operations on rational numbers.

At the end of this unit administer Linkit NJSL Form A.

Transfer

Students will be able to independently use their learning to solve real-world problems involving...

- representing and using rational numbers in solve real-life situation problems.
- representing rational numbers with visuals (including distance models), language, and real-life contexts.
- using a number line model to represent the unique placement of any number in relation to other numbers.
- apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

For more information, read the following article by Grant Wiggins.

http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=60

Meaning

Understandings

Students will understand that...

- One representation may sometimes be more helpful than another; and, used together, multiple representations give a fuller understanding of a problem.
- A quantity can be represented numerically in various ways.
- Numeric fluency includes both the understanding of and the ability to appropriately use numbers.
- Computational fluency includes understanding not only the meaning, but also the appropriate use of numerical operations.
- In many cases, there are multiple algorithms for finding a mathematical solution, and those algorithms are frequently associated with different cultures.

Essential Questions

Students will keep considering...

- Unit 1: How can mathematical ideas be represented?
- What happens when you add, subtract, multiply, and divide integers?
- What happens when you add, subtract, multiply, and divide fractions?

Application of Knowledge and Skill

Students will know...

Students will know...

Negative integers can be used in everyday contact that involve values below zero.

Every quotient (with non-zero divisor) is a rational number.

Students will be skilled at...

Students will be skilled at...

- Add and subtract rational numbers. (7.NS.1)
- Represent addition and subtraction on a horizontal or vertical number line diagram. (7.NS.1)
- Use words, visuals and symbols to describe situations in which opposite quantities combine to make 0. (7.NS.1)
- Represent addition of quantities with symbols, visuals and words by showing positive or negative direction from one quantity to the other. (7.NS.1)
- Show that a number and its opposite have a sum of 0 using visuals, symbols, words and real-world contexts. (7.NS.1)
- Use the term “additive inverse” to describe 2 numbers whose sum is zero. (7.NS.1)
- Use commutative, distributive, associative, identity, and inverse properties to add and subtract rational numbers. (7.NS.1)
- Use the term “absolute value” to describe the distance from zero on number line diagram and with symbols. (7.NS.1)
- Multiply and divide rational numbers. (7.NS.2)
- Use the distributive property to multiply positive and negative rational numbers using symbols, visuals, words and real-life contexts. (7.NS.2)
- Interpret products of rational numbers by describing real-world contexts. (7.NS.2)
- Identify situations when integers can and cannot be divided. (7.NS.2)
- Use words and real-world contexts to explain why the quotient of two integers is a rational number. (7.NS.2)
- Identify and apply properties used when multiplying and dividing rational numbers. (7.NS.2)
- Convert a rational number to a decimal using long division. (7.NS.2)
- Identify terminating or repeating decimal representations of rational numbers. (7.NS.2)
- Solve real world and mathematical problems involving the four operations with rational numbers. (7.NS.3)

Academic Vocabulary

Chapter 1

- Absolute value, additive inverse, graph, integer, negative integer, opposites, positive integer, zero pair.
- Bar notation, common denominator, least common denominator, like fractions, rational number, repeating decimal, terminating decimal, unlike fractions

Learning Goal

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

CRP.K-12.CRP2.1

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

CRP.K-12.CRP5.1

Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people,

organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.

CAEP.9.2.8.B.5

Analyze labor market trends using state and federal labor market information and other resources available online.

TECH.8.1.8

Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Target #2.5.1 (Level of Difficulty: Retrieval, DOK: 1 - Recall)

SWBAT: compare rational numbers.

SWBAT use rational numbers to describe temperature and elevation.

MA.6.NS.C.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.

MA.6.NS.C.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.

MA.7.NS.A.1a

Describe situations in which opposite quantities combine to make 0.

MA.7.NS.A.1c

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.

MA.K-12.1

Make sense of problems and persevere in solving them.

MA.K-12.3

Construct viable arguments and critique the reasoning of others.

MA.K-12.4

Model with mathematics.

MA.K-12.5

Use appropriate tools strategically.

Target #2.5.2 (Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWBAT use a number line to add positive and negative numbers.

MA.7.EE.B.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.

MA.7.NS.A.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.

MA.7.NS.A.3

Solve real-world and mathematical problems involving the four operations with rational numbers.

MA.7.NS.A.1b

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.

MA.7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.7	Look for and make use of structure.

Target #2.5.3 --(Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWBAT understand how to add positive and negative numbers in general.

MA.7.NS.A.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.
MA.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.
MA.7.NS.A.1c	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.
MA.7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.

Target#2.5.4-- (Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWBAT understand what positive and negative numbers mean in a situation involving money.

MA.7.NS.A.1a	Describe situations in which opposite quantities combine to make 0.
MA.7.NS.A.1b	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.
MA.7.NS.A.1c	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.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.

MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.

Target #2.5.5 (Level of Difficulty: Comprehension(integrating), DOK: 3 - strategic thinking)

SWBAT explain the relationship between addition and subtraction of rational numbers.

SWBAT use a number line to subtract positive and negative numbers.

MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.7.NS.A	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
MA.7.NS.A.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.
MA.7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.

Target #2.5.6 (Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWBAT find the difference between two rational numbers.

SWBAT understand how to subtract positive and negative numbers in general.

MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.C.6a	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.
MA.6.NS.C.6b	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.
MA.6.NS.C.6c	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.
MA.7.EE.B.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.
MA.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.
MA.7.NS.A.2a	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.
MA.7.NS.A.2c	Apply properties of operations as strategies to multiply and divide rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.8	Look for and express regularity in repeated reasoning.
CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

Target #2.5.7 (Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWABT: solve problems that involve adding and subtracting rational numbers.

MA.6.NS.C.6a	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.
MA.6.NS.C.6b	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.
MA.6.NS.C.6c	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.
MA.7.EE.B.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.
MA.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.
MA.7.NS.A.2a	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.
MA.7.NS.A.2c	Apply properties of operations as strategies to multiply and divide rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.8	Look for and express regularity in repeated reasoning.
CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

Target #2.5.8 (Level of Difficulty: Retrieval(executing), DOK: 2-skill/concept)

SWBAT multiply a positive number with a negative number.

SWBAT use rational numbers to represent speed and direction.

MA.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
MA.7.NS.A.2a	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.
MA.7.NS.A.2b	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.
MA.7.NS.A.2c	Apply properties of operations as strategies to multiply and divide rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.

Target #2.5.9 (Level of Difficulty: Retrieval, DOK: 2 - skill)

SWBAT explain what it means when time is represented with a negative number in a situation about speed and direction.

SWBAT multiply two negative numbers.

MA.6.NS.A	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.C.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.
MA.6.NS.C.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.
MA.7.EE.B.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.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

Target #2.5.10 (Level of Difficulty: Retrieval, DOK: 2 - skill)

SWBAT solve problems that involve multiplying rational numbers.

MA.7.EE.B.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.
MA.7.NS.A	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
MA.7.NS.A.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.
MA.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.
MA.7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.

Target #2.5.11 (Level of Difficulty: Retrieval, DOK: 2 - skill)

SWBAT divide rational numbers.

MA.6.NS.A	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
MA.6.NS.A.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.
MA.6.NS.B	Compute fluently with multi-digit numbers and find common factors and multiples.
MA.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.B.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.

Target #2.5.12 (Level of Difficulty: Comprehension(integrating), DOK: 3 - strategic thinking)

SWBAT solve problems that involve multiplying and dividing rational numbers.

SWBAT solve problems that involve negative rates.

MA.6.NS.A	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
MA.6.NS.A.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.
MA.6.NS.B	Compute fluently with multi-digit numbers and find common factors and multiples.
MA.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.B.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.
MA.6.NS.C	Apply and extend previous understandings of numbers to the system of rational numbers.

Target #2.5.13 (Level of Difficulty: Comprehension(integrating), DOK: 3 - strategic thinking)

SWBAT add, subtract, multiply, and divide rational numbers.

SWBAT evaluate expressions that involve rational numbers.

MA.6.NS.A	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
MA.6.NS.A.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.
MA.6.NS.B	Compute fluently with multi-digit numbers and find common factors and multiples.
MA.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
MA.6.NS.B.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.
MA.6.NS.C	Apply and extend previous understandings of numbers to the system of rational numbers.

MA.6.NS.C.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.

Target #2.5.14 (Level of Difficulty: Comprehension(integrating), DOK: 3 - strategic thinking)

SWBAT represent situations with expressions that include rational numbers.

SWBAT solve problems using the four operations with rational numbers.

MA.6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

MA.6.NS.A.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.

MA.6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.

MA.6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.

MA.6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

MA.6.NS.B.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.

MA.6.NS.C.6a 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.

MA.6.NS.C.6b 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.

MA.6.NS.C.6c 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.

Target 2.5.15 (Level of Difficulty: Knowledge Utilization, DOK: 4 - Extended Thinking)

SWBAT solve equations that include rational numbers and have rational solutions.

MA.6.NS.C.7 Understand ordering and absolute value of rational numbers.

MA.6.NS.C.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.

MA.6.NS.C.7a Interpret statements of inequality as statements about the relative position of two

	numbers on a number line diagram.
MA.6.NS.C.7b	Write, interpret, and explain statements of order for rational numbers in real-world contexts.
MA.6.NS.C.7c	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.
MA.6.NS.C.7d	Distinguish comparisons of absolute value from statements about order.

Target # 2.5.16 (Level of Difficulty: Knowledge Utilization, DOK: 4 - Extended Thinking)

SWBAT explain what the solution to an equation means for the situation.

SWBAT write and solve equations to represent situations that involve rational numbers.

MA.6.NS.C.7	Understand ordering and absolute value of rational numbers.
MA.6.NS.C.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.
MA.6.NS.C.7a	Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
MA.6.NS.C.7b	Write, interpret, and explain statements of order for rational numbers in real-world contexts.
MA.6.NS.C.7c	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.
MA.6.NS.C.7d	Distinguish comparisons of absolute value from statements about order.

Formative Assessment and Performance Opportunities

- Aleks.com
- Exit Ticket
- Interactive Notes
- Kahoot
- Quizizz
- Quizlet Live
- Student Presentation
- Student-Teacher Conference
- White Boards

Summative Assessment

- Aleks
- Benchmark Test

- Linkit
- Project
- Quiz
- Test

21st Century Life and Careers

CAEP.9.2.8.B.2	Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.
CAEP.9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.
CAEP.9.2.8.B.4	Evaluate how traditional and nontraditional careers have evolved regionally, nationally, and globally.

Accommodations / Modifications

- Black & Red Chips
- calculators
- Fact Table
- Kahn Academy Resources
- leveled centers
- modifications as per IEP/504
- review and practice
- small group instruction
- ST Math
- teacher conferences
- Visual Integer Notes
- word banks

Unit Resources

- Aleks online learning
- CK12 Online Resources
- <http://achievethecore.org/page/1118/coherence-map>

Interdisciplinary Connections

- History: trace historical migration of people and find the total distance traveled compared to the actual distance traveled. do the same with any famous war march or battle.
- Science: record 3 temperatures each day throughout a week and discuss how the total change is different then the actual change.

6-8.MS-ESS2-5.2	Cause and effect: Mechanism and explanation.
6-8.MS-ESS2-5.ESS2.D	Weather and Climate
6-8.MS-ESS2-5.ESS2.D.1	Because these patterns are so complex, weather can only be predicted probabilistically.
SOC.6.1.8.B.1.b	Analyze the world in spatial terms (e.g., longitude, latitude) using historical maps to determine what led to the exploration of new water and land routes.
SOC.6.1.8.D.2.a	Analyze the power struggle among European countries, and determine its impact on people living in Europe and the Americas.
SOC.6.1.8.D.2.b	Compare and contrast the voluntary and involuntary migratory experiences of different groups of people, and explain why their experiences differed.