Mrs. Rayman's 6th Grade Math Weekly Lesson Plans

Unit 2 Common Core State 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. | divide multi-digit numbers using the standard algorithm. | 6.NS.3 Fluently add, subtract, multiply, and divide using the standard algorithm for each operation. | 6.NS.3c Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part of a percent. | 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 |
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Unit 2 Essential Questions:

- How are Fractions, Decimals, and Percents Related?
- How can the quotients of fractions be modeled?
- How can knowledge of operations with fractions be applied to operations with decimals and percents?

Number Sense:

- Ways to make a number
- Ways to solve a math problem mentally

Monday and Tuesday- Review Long Division AND Engage NY Lesson 2-11

Objective: Students use estimation and place value to determine the placement of the decimal point in products and to determine that the size of the product is relative to each factor. Students will discover and use connections between fraction multiplication and decimal multiplication.

Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video: <u>https://www.youtube.com/watch?v=_jcW-ZgpRbM</u>
- 2. Classwork: Engage NY Lesson 2-11 Exploratory Challenge and Exercises 1-4
- 3. Exit Ticket: 1.) Calculate the product: 78.93 x 32.45 2.) Paint costs \$29.95 per gallon. Nikki needs 12.25 gallons to complete a painting project. How much will Nikki spend on paint? Remember to round to the nearest penny.
- 4. Homework: Engage NY Lesson 2-11 Problem Set/Homework

Wednesday Engage NY Lesson 2-12

Objective: Students connect estimation with place value in order to determine the standard algorithm for division. Agenda:

- 5. Warm up: Fraction/Percent of the Day AND Video:
- 6. Classwork: Engage NY Lesson 2-12

7. Exit Ticket:

8. Homework: Engage NY Lesson 2-12 Problem Set/Homework

Thursday Engage NY Lesson 2-13

Objective: Students understand that the standard algorithm of division is simply a tally system arranged in place value columns. Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video:
- 2. Classwork: Engage NY Lesson 2-13 Examples 1-2 Exercises 1-5
- 3. Exit Ticket: Divide using the division algorithm: 392,196 / 87
- 4. Homework: Engage NY Lesson 2-13 Problem Set/Homework

Friday Engage NY Lesson 2-14

Objective: Students use their knowledge of dividing multi-digit numbers to solve for quotients of multi-digit decimals and understand the mathematical concept of decimal placement in the divisor and dividend and its connection to multiplying. Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video: <u>https://www.youtube.com/watch?v=KT2rB6VIwPw</u>
- 2. Classwork: Engage NY Lesson 2-14 Examples 1-2 Exercises 1-7
- 3. Homework: Engage NY Lesson 2-14 Problem Set/Homework

| | Monday | Tuesday | Wednesday | Thursday | Friday |
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| Accessing Prior Knowledge - Where are your students headed? Where have they been? How will you make sure the students know where they are going? | Warm up: Fraction/Percent of the Day AND Video: <u>https://www.youtube.com/</u> watch?v=_jcW-ZgpRbM | Warm up: Fraction/Percent of the Day AND Video: <u>https://www.youtube.com</u> /watch?v= jcW-ZgpRbM | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: |
| Guided Practice - What events will help students experience and explore the big idea and questions in the unit? How will you equip them with needed skills and knowledge? | Direct Instruction: Engage NY Lesson 2-11 Exploratory Challenge Examples 1-4 | Direct Instruction: Engage NY Lesson 2-11 Exploratory Challenge Examples 1-4 | Direct Instruction: Engage NY Lesson 2-12 Examples and Exercises | Direct Instruction: Engage NY Lesson 2-13 Examples 1-2 and Exercises 1-5 | Direct Instruction: Engage NY Lesson 2-14 Examples 1-2 Exercises 1-7 |
| Independent Practice - How will you cause students to reflect and rethink? How will you guide them in rehearsing, revising, and refining their work? How will students work together to ensure mastery for all? | Student Notes and Homework: Engage NY Lesson 2-11 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 2-11 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 2-12Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 2-13 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 2-14 Problem Set/Homework |
| Assessing Knowledge - How will you help students to exhibit and self-evaluate their growing skills, knowledge, and understanding throughout the unit? | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations |
| Differentiation/Accommodatio n - How will you tailor and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit? | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments |
| Learner Outcome - How will students demonstrate, as a result of lesson, their level of mastery? • Understand • Know • Do | Students use estimation and place value to determine the placement of the decimal point in products and to determine that the size of the product is relative to each factor. Students will discover and use connections between fraction multiplication and decimal multiplication. | Students use estimation and place value to determine the placement of the decimal point in products and to determine that the size of the product is relative to each factor. Students will discover and use connections between fraction multiplication and decimal multiplication. | Students connect estimation with place value in order to determine the standard algorithm for division. | Students understand that the standard algorithm of division is simply a tally system arranged in place value columns. | Students use their knowledge of dividing multi-digit numbers to solve for quotients of multi-digit decimals and understand the mathematical concept of decimal placement in the divisor and dividend and its connection to multiplying. |

Mrs. Rayman's 6th Grade Advanced Math Weekly Lesson Plans

Unit 3 Common Core State Standards

| 6.NS.5 Understand that positive and negative numbers are used togethers to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. 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. | 5 | 6.NS.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. | 6.NS.5 Understand that positive and negative numbers are used togethers to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. |
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Unit 3 Essential Questions:

- How do graphing points on the coordinate system help in solving problems?
- How does absolute value help us to understand distance on a coordinate plane and support a deeper understanding of the relationship between positive and negative rational numbers?

Number Sense:

- Count around the room
- Ways to make a number
- Organic number line

Monday Engage NY Lesson 3-1 & 3-2

Objective: Students extend their understanding of the number line, which includes zero and numbers to the right or above zero that are greater than zero and numbers to the left or below zero that are less than zero. Students use positive integers to locate negative integers by moving in the opposite direction from zero. Students use positive and negative numbers to indicate change in elevation with a fixed reference point.

Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video:
- 2. Classwork: Engage NY Lesson 3-1 and Lesson 3-2
- 3. Homework: Engage NY Lesson 3-1 and 3-2 Problem Set/Homework

Tuesday Engage NY Lesson 3-4

Objective: Students understand that each nonzero integer, a, has an opposite, denoted -a, and that -a and a are opposites if they are on opposite sides of zero and are the same distance from zero on the number line. Students will recognize that zero is it's own opposite.

Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video: <u>https://www.youtube.com/watch?v=LxIIUeusDYY</u>
- 2. Classwork: Engage NY Lesson 3-4 Examples 1-2 and Exercises 1-6
- 3. Homework: Engage NY Lesson 3-4 Problem Set/Homework

Wednesday/ Thursday Engage NY Lesson 3-5 and Lesson 3-6

Objective: Students will learn that the opposite of an opposite will be the original number- for example -(-(25)= 25. Students will use the number lines that extend in both directions and use 0 and 1 to locate integers and rational numbers on the number line. Agenda:

- 1. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=_BgblvF90UE
- 2. Classwork: Engage NY Lesson 3-5 and 3-6
- 3. Homework: Engage NY Lesson 3-5 and 3-6 Problem Set/Homework

Friday Engage NY Lesson 3-8

Objective: Students will write, interpret, and explain statements of order for rational numbers in the real world. Agenda:

- 4. Warm up: Fraction/Percent of the Day AND Video:
- 5. Classwork: Engage NY Lesson 3-8 Examples 1-2 and Exercises 1-6
- 6. Homework: Engage NY Lesson 3-8 Problem Set/Homework

| | Monday | Tuesday | Wednesday | Thursday | Friday |
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| Accessing Prior Knowledge - Where are your students headed? Where have they been? How will you make sure the students know where they are going? | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: | Warm up: Fraction/Percent of the Day AND Video: |
| Guided Practice - What events will help students experience and explore the big idea and questions in the unit? How will you equip them with needed skills and knowledge? | Direct Instruction: Engage NY Lesson 3-1 Examples 1-2 and Exercises 1-5 | Direct Instruction: Engage NY Lesson 3-4 Examples 1-2 and Exercises 1-6 | Direct Instruction: Engage NY Lessons 3-5 and 3-6 | Direct Instruction: Engage NY Lessons 3-5 and 3-6 | Direct Instruction: Engage NY Lesson 3-8 Examples 1-2 and Exercises 1-6 |
| Independent Practice - How will you cause students to reflect and rethink? How will you guide them in rehearsing, revising, and refining their work? How will students work together to ensure mastery for all? | Student Notes and Homework: Engage NY Lesson 3-1 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 3-4 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 3-5 and 3-6 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 3-5 and 3-6 Problem Set/Homework | Student Notes and Homework: Engage NY Lesson 3-8 Problem Set/Homework |
| Assessing Knowledge - How will you help students to exhibit and self-evaluate their growing skills, knowledge, and understanding throughout the unit? | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations | Exit Tickets and Teacher Observations |
| Differentiation/Accommodation - How will you tailor and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit? | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments | Pre written vocabulary & notes, extended time, preferential seating, reduced assignments |
| Learner Outcome - How will students demonstrate, as a result of lesson, their level of mastery? • Understand • Know • Do | Students extend their understanding of the number line, which includes zero and numbers to the right or above zero that are greater than zero and numbers to the left or below zero that are less than zero. Students use positive integers to locate negative integers by moving in the opposite direction from zero. | Students understand that each nonzero integer, a, has an opposite, denoted -a, and that -a and a are opposites if they are on opposite sides of zero and are the same distance from zero on the number line. Students will recognize that zero is it's own opposite. | Students will learn that the opposite of an opposite will be the original number- for example -(-(25)= 25. Students will use the number lines that extend in both directions and use 0 and 1 to locate integers and rational numbers on the number line. | Students will learn that the opposite of an opposite will be the original number- for example -(-(25)= 25. Students will use the number lines that extend in both directions and use 0 and 1 to locate integers and rational numbers on the number line. | Students will write, interpret, and explain statements of order for rational numbers in the real world. |