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

Date: Week of October 30, 2017

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.	**6.NS. 2** Fluently 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.

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*

<u>Monday Engage NY Lesson 2-18</u>

Objective: Students find the least common multiple and greatest common factor and apply knowledge of factors to use the distributive property.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=Xg9NgvO8g6Q AND https://www.youtube.com/watch?v=31M99xiNqm4
2. Classwork: Engage NY Lesson 2-18 Examples 1-2 Stations 1-4
3. Exit Ticket: *1.) Find the LCM and GCF of 12 and 15 2.) Write two numbers, neither of which are 8, whose GCF is 8 3.) Write two numbers, neither of which is 28, whose LCM is 28. AND Complete the chart (located on the exit ticket print out)*
4. Homework: Engage NY Lesson 2-18 Problem Set/Homework

Tuesday Engage NY Lesson 2-1

Objective: Students use visual models, such as fraction bars, number lines, and area models, to show the quotient of whole numbers and fractions to show the connection between them and the multiplication of fractions. Students divide a fraction by a whole number.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video:
2. Classwork: Engage NY Lesson 2-1 Examples 1-3 and Exercises 1-6
3. Exit Ticket: *Write an equivalent multiplication expression. Then, find the quotient in its simplest form. Use a model to support your response. 1.) ¼ divided by 2 2.) ⅔ divided by 6*
4. Homework: Engage NY Lesson 2-1 Problem Set/Homework

Wednesday Engage NY Lesson 2-2

Objective: Students use fraction bars, number lines, and area models to show the quotient of whole numbers and fractions and to show the connection between those models and the multiplication of fractions. Students understand the difference between a whole number being divided by a fraction and a fraction being divided by a whole number.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video:
2. Classwork: Engage NY Lesson 2-2 Examples 1-2 and Exercises 1-5
3. Exit Ticket: *1.) Henry bought 4 pies, which he plans to share with a group of his friends. If there is exactly enough to give each member of the group one-sixth of the pie, how many people are in the group? 2.) Rachel finished ¾ of the race in 6 hours. How long was the entire race?*
4. Homework: Engage NY Lesson 2-2 Problem Set/Homework

Thursday Engage NY Lesson 2-3

Objective: Students use fraction bars and area models to show the division of fractions by fractions with common denominators.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLIm_vEc
2. Classwork: Engage NY Lesson 2-3 Examples 1-3 and Exercises 1-6
3. Exit Ticket: *1.) Find the quotient. Draw a model to support your solution. 9/4 divided by ¾ 2.) 7/3 divided by 2/3*
4. Homework: Engage NY Lesson 2-3 Problem Set/Homework

Friday Engage NY Lesson 2-4

Objective: Students use use fraction bars and area models to divide fractions by fractions with different denominators. Students will make connections between visual models and multiplication of fractions.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=8Tv7WunDsLg
2. Classwork: Engage NY Lesson 2-4 Examples 1-4 and Exercises 1-5
3. Exit Ticket: *1.) Calculate each quotient. If needed, draw a model 9/4 divided by ⅜ 2.) ⅘ divided by ⅔*
4. Homework: Engage NY Lesson 2-4 Problem Set/Homework

Mrs. Rayman's Daily Instructional Plan- Grade 6 Math

	Monday	Tuesday	Wednesday	Thursday	Friday
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: https://www.youtube.com/watch?v=_jcW-ZgpRbM	Warm Up: Fraction/Percent of the Day	Warm Up: Fraction/Percent of the Day	Warm Up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLlm_vEc	Warm up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLlm_vEc
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 2-18 Examples 1-2 Stations 1-4	Direct Instruction: Engage NY Lesson 2-1 Examples 1-3 and Exercises 1-6	Direct Instruction: Engage NY Lesson 2-2 Examples 1-2 and Exercises 1-5	Direct Instruction: Engage NY Lesson 2-3 Example 1 and Exercises 1	Direct Instruction: Engage NY Lesson 2-4
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 2-18 Problem Set/Homework	Student Ratio Notes and Homework: Engage NY Lesson 2-1 Problem Set/Homework	Student Ratio Notes and Homework: Engage NY Lesson 2-2 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-3 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-4 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 find the least common multiple and greatest common factor and apply knowledge of factors to use the distributive property.	Warm Up: Fraction/Percent of the Day	Students use fraction bars, number lines, and area models to show the quotient of whole numbers and fractions and to show the connection between those models and the multiplication of fractions. Students understand the difference between a whole number being divided by a fraction and a fraction being divided by a whole number.	Students use fraction bars and area models to show the division of fractions by fractions with common denominators.	Students use use fraction bars and area models to divide fractions by fractions with different denominators. Students will make connections between visual models and multiplication of fractions.

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

Date: Week of October 30, 2017

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.	**6.NS. 2** Fluently 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.

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*

<u>Monday Engage NY Lesson 2-2</u>

Objective: Students use fraction bars, number lines, and area models to show the quotient of whole numbers and fractions and to show the connection between those models and the multiplication of fractions. Students understand the difference between a whole number being divided by a fraction and a fraction being divided by a whole number.

Agenda:

5. Warm up: Fraction/Percent of the Day AND Video:
6. Classwork: Engage NY Lesson 2-2 Examples 1-2 and Exercises 1-5
7. Exit Ticket: *1.) Henry bought 4 pies, which he plans to share with a group of his friends. If there is exactly enough to give each member of the group one-sixth of the pie, how many people are in the group? 2.) Rachel finished ¾ of the race in 6 hours. How long was the entire race?*
8. Homework: Engage NY Lesson 2-2 Problem Set/Homework

Tuesday Engage NY Lesson 2-3

Objective: Students use fraction bars and area models to show the division of fractions by fractions with common denominators.

Agenda:

5. Warm up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLlm_vEc
6. Classwork: Engage NY Lesson 2-3 Examples 1-3 and Exercises 1-6
7. Exit Ticket: *1.) Find the quotient. Draw a model to support your solution. 9/4 divided by ¾ 2.) 7/3 divided by 2/3*
8. Homework: Engage NY Lesson 2-3 Problem Set/Homework

Wednesday Engage NY Lesson 2-4

Objective: Students use use fraction bars and area models to divide fractions by fractions with different denominators. Students will make connections between visual models and multiplication of fractions.

Agenda:

5. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=8Tv7WunDsLg
6. Classwork: Engage NY Lesson 2-4 Examples 1-4 and Exercises 1-5
7. Exit Ticket: *1.) Calculate each quotient. If needed, draw a model 9/4 divided by ⅜ 2.) ⅘ divided by ⅔*
8. Homework: Engage NY Lesson 2-4 Problem Set/Homework

Thursday Engage NY Lesson 2-6

Objective: Students demonstrate further understanding of division of fractions by creating their own word problems. They will select a **partitive** division problem, draw a model, find an answer, choose a unit, and set up a situation.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=rRMKPzuotFs
2. Classwork: Engage NY Lesson 2-6 Examples 1-2 and Exercises 1-2
3. Exit Ticket: *Write a story problem using the partitive interpretation of division for the following: 25 Divided by 5/8 = 40*
4. Homework: Engage NY Lesson 2-6 Problem Set/Homework

Friday Engage NY Lesson 2-7

Objective: Students formally connect models of fraction division to multiplication and the invert-and-multiply rule, in particular.

Agenda:

1. Warm up: Fraction/Percent of the Day AND Video: https://www.youtube.com/watch?v=PCPst0eW2Jk
2. Classwork: Engage NY Lesson 2-7 Examples 1-3
3. Exit Ticket: *1.) Write the reciprocal of the following numbers: 7/10 ½ 5 2.) Rewrite this division expression as an equivalent multiplication expression: ⅝ divided by ⅔ 3.) Solve problem 2 and draw a model to support your solution.*
4. Homework: Engage NY Lesson 2-7 Problem Set/Homework

Mrs. Rayman's Daily Instructional Plan- Grade 6 Advanced Math

	Monday	Tuesday	Wednesday	Thursday	Friday
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	Warm Up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLlm_vEc	Warm up: Fraction/Percent of the Day AND Video: http://www.youtube.com/watch?v=GOucLlm_vEc	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 2-2 Examples 1-2 and Exercises 1-5	Direct Instruction: Engage NY Lesson 2-3 Example 1 and Exercises 1	Direct Instruction: Engage NY Lesson 2-4	Direct Instruction: Engage NY Lesson 2-6 Examples 1-2 and Exercises 1-2	Direct Instruction: Engage NY Lesson 2-7 Examples 1-3
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 Ratio Notes and Homework: Engage NY Lesson 2-2 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-3 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-4 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-6 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2-7 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 use fraction bars, number lines, and area models to show the quotient of whole numbers and fractions and to show the connection between those models and the multiplication of fractions. Students understand the difference between a whole number being divided by a fraction and a fraction being divided by a whole number.	Students use fraction bars and area models to show the division of fractions by fractions with common denominators.	Students use use fraction bars and area models to divide fractions by fractions with different denominators. Students will make connections between visual models and multiplication of fractions.	Students demonstrate further understanding of division of fractions by creating their own word problems. They will select a **partitive** division problem, draw a model, find an answer, choose a unit, and set up a situation.	Students formally connect models of fraction division to multiplication and the invert-and-multiply rule, in particular.