

Common Core State Standards

6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	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.	6.RP.3a 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.
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Essential Question: *How do you use ratio concepts and ratio reasoning to solve problems?*

Monday: Engage New York Lesson 1-2 RATIOS

Objective: Students will reinforce their understanding that a ratio is an ordered pair of nonnegative numbers, which are not both zero. Students will create multiple ratios from a context in which more than two quantities are given and be able to come up with real world contextual situations to match a given ratio.

Agenda:

1. Warm up: (10 min) Ratio of the Day Worksheet and Math Playground: What is a Ratio? http://www.mathplayground.com/howto_ratios.html (Reteach ratios)
2. Classwork: (10 min) Engage NY Exercise 1, (20 Min) Exploratory Challenge, (10 min) Vocabulary (Ratio Table)
3. Exit Ticket: Give three different ratios with a description of the ratio relationship using male teachers to female teachers at MMS (preprinted exit ticket)

Homework: Engage NY Lesson 1-2 Problem Set

Tuesday: Engage NY Lesson 1.3

Objective: Students will develop an understanding of equivalent ratios by using tape diagrams to explore possible quantities of each part when given the part to part ratio. Students will use tape diagrams to solve problems when the part to part ratio is given and the value of one of the quantities is given.

Agenda:

1. Warm up: Ratio of the Day Worksheet AND "Create a tape diagram" Videos: Intro to Tape Diagrams Parts 1 and 2: <https://www.youtube.com/watch?v=6pfQnppWetM> AND https://www.youtube.com/watch?v=_rrr_ayouY4
2. Classwork: Engage NY Lesson 1.3 Exercises 1-4 (Optional if extra time: Create a situation to go along with a tape diagram)
3. Exit Ticket: "Create a problem to go along with the tape diagram"
4. Homework: Solving Ratio Problems Using Tape Diagrams Worksheet

Wednesday Engage NY Lesson 1.4

Objective: Students will identify equivalent ratios, when given a ratio. Students will use tape diagrams and the description of equivalent ratios to determine if two ratios are equivalent.

Agenda:

1. Warm up: Ratio of the Day Worksheet "Solve ratio problems using tape diagrams" Video: Equivalent Ratios: <https://www.youtube.com/watch?v=rzLPMzAdC4s>
2. Classwork: Engage NY Lesson 1.4 Exercises 1-2
3. Exit Ticket: "Use a tape diagram to solve the problem"
4. Homework: Equivalent Ratios Practice Sheet

Thursday Engage NY Lesson 1.5

Objective: Students will use tape diagrams to find an equivalent ratio when given the part to part ratio and the total of those two quantities. Students use tape diagrams to find an equivalent ratio when given the part to part ratio and the difference between those two quantities.

Agenda:

1. Warm up: Ratio of the Day AND "Matching equivalent ratios"
2. Classwork: Engage NY Lesson 1.5 Exercises 1-4
3. Exit Ticket: "Equivalent Ratios" Exit Slip
4. Homework: Engage NY "Finding Equivalent Ratios" and/or Equivalent Ratios Daily Take Home Quiz (depending on time)

Friday Engage NY Lesson 1.6

Objective: Students will use tape diagrams to solve problems when given a ratio between two quantities and a change to those quantities that changes the ratio.

Agenda:

1. Warm up: Ratio of the Day AND "Writing equivalent ratios"
2. Classwork: Engage NY Lesson 1.6 Exercises 2-7
3. Exit Ticket: "Solving problems using equivalent ratios"
4. Homework: Equivalent Ratios Worksheet

(Extra lesson if able to combine lessons one day this week) Engage NY Lesson 1.7

Objective: Students will understand the relationship between ratios and fractions. Students describe the fraction $\frac{3}{5}$ associated with the ratio as the value of the ratio 3 to 5. Students will understand that when given a ratio, different ratios can be formed from the numbers and the ratios are associated with the same ratio relationship.

Agenda:

1. Warm up: Ratio of the Day AND Fun Video for Ratios: <https://www.youtube.com/watch?v=YFeU6SSmpv8>
2. Classwork: Engage NY Lesson 1.7 Exercises 1-2
3. Exit Ticket: Use Equivalent Ratios to find unknown values
4. Homework: Engage NY Lesson 7: Associated Ratios and the Value of a Ratio

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: Ratio of the Day Friday's Classwork & Homework	Warm Up: Ratio of the Day Monday's Classwork & Homework	Warm Up: Ratio of the Day Tuesday's Classwork & Homework	Warm Up: Ratio of the Day Wednesday's Classwork & Homework	Warm Up: Ratio of the Day Thursday's Classwork & Homework
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 1.3 Exercises 1-4 Create Tape Diagrams and Situations to go along with Tape Diagrams	Direct Instruction: Engage NY Lesson 1.4 Exercises 1-2	Direct Instruction: Engage NY Lesson 1.5 Exercises 1-4	Direct Instruction: Engage NY Lesson 1.6 Exercises 2-7	Direct Instruction: Engage NY Lesson 1.7 Exercises 1-2
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: Solving Ratio Problems Using Tape Diagrams Worksheet	Student Ratio Notes and Homework: Equivalent Ratios Practice Sheet	Student Ratio Notes and Homework: Engage NY "Finding Equivalent Ratios"	Student Ratio Notes and Homework: Equivalent Ratio Worksheet	Student Ratio Notes and Homework: Engage NY Lesson 7: Associated Ratios and the Value of a Ratio
Assessing Knowledge - How will you help students to exhibit and self-evaluate their growing skills, knowledge, and understanding throughout the unit?	Exit Ticket and Teacher Observations	Exit Ticket and Teacher Observations	Exit Ticket and Teacher Observations	Exit Ticket and Teacher Observations	Exit Ticket 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? <ul style="list-style-type: none"> • Understand • Know • Do 	Students will develop an understanding of equivalent ratios by using tape diagrams to explore possible quantities of each part when given the part to part ratio. .	Students will identify equivalent ratios, when given a ratio. Students will use tape diagrams and the description of equivalent ratios to determine if two ratios are equivalent.	Students will use tape diagrams to find an equivalent ratio when given the part to part ratio and the total and or the difference of those two quantities.	Students will use tape diagrams to solve problems when given a ratio between two quantities and a change to those quantities that changes the ratio.	Students will understand the relationship between ratios and fractions and that when given a ratio, different ratios can be formed with the same ratio relationship.

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

Date: Week of September 17, 2018

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Essential Question: *How do you use ratio concepts and ratio reasoning to solve problems?*

Monday: Engage NY Lesson 1.3

Objective: Students will develop an understanding of equivalent ratios by using tape diagrams to explore possible quantities of each part when given the part to part ratio. Students will use tape diagrams to solve problems when the part to part ratio is given and the value of one of the quantities is given.

Agenda:

5. Warm up: Ratio of the Day Worksheet AND "Create a tape diagram" Videos: Intro to Tape Diagrams Parts 1 and 2:
<https://www.youtube.com/watch?v=6pfQnppWetM> AND https://www.youtube.com/watch?v=_rrr_ayouY4
6. Classwork: Engage NY Lesson 1.3 Exercises 1-4 (Optional if extra time: Create a situation to go along with a tape diagram)
7. Exit Ticket: "Create a problem to go along with the tape diagram"
8. Homework: Solving Ratio Problems Using Tape Diagrams Worksheet

Monday: Engage NY Lesson 1.4

Objective: Students will identify equivalent ratios, when given a ratio. Students will use tape diagrams and the description of equivalent ratios to determine if two ratios are equivalent.

Agenda:

5. Warm up: Ratio of the Day Worksheet "Solve ratio problems using tape diagrams" Video: Equivalent Ratios:
<https://www.youtube.com/watch?v=rzLPMzAdC4s>
6. Classwork: Engage NY Lesson 1.4 Exercises 1-2
7. Exit Ticket: "Use a tape diagram to solve the problem"
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Tuesday Engage NY Lesson 1.5

Objective: Students will use tape diagrams to find an equivalent ratio when given the part to part ratio and the total of those two quantities. Students use tape diagrams to find an equivalent ratio when given the part to part ratio and the difference between those two quantities.

Agenda:

5. Warm up: Ratio of the Day AND "Matching equivalent ratios"
6. Classwork: Engage NY Lesson 1.5 Exercises 1-4
7. Exit Ticket: "Equivalent Ratios" Exit Slip
8. Homework: Engage NY "Finding Equivalent Ratios" and/or Equivalent Ratios Daily Take Home Quiz (depending on time)

Tuesday Engage NY Lesson 1.6

Objective: Students will use tape diagrams to solve problems when given a ratio between two quantities and a change to those quantities that changes the ratio.

Agenda:

5. Warm up: Ratio of the Day AND "Writing equivalent ratios"
6. Classwork: Engage NY Lesson 1.6 Exercises 2-7
7. Exit Ticket: "Solving problems using equivalent ratios"
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Wednesday Engage NY Lesson 1.7

Objective: Students will understand the relationship between ratios and fractions. Students describe the fraction $\frac{3}{5}$ associated with the ratio as the value of the ratio 3 to 5. Students will understand that when given a ratio, different ratios can be formed from the numbers and the ratios are associated with the same ratio relationship.

Agenda:

5. Warm up: Ratio of the Day AND Fun Video for Ratios: <https://www.youtube.com/watch?v=YFeU6SSmpv8>
6. Classwork: Engage NY Lesson 1.7 Exercises 1-2
7. Exit Ticket: Use Equivalent Ratios to find unknown values
8. Homework: Engage NY Lesson 7: Associated Ratios and the Value of a Ratio

Wednesday: Engage NY Lesson 1.8

Objective: Students will understand that the value of A:B is the quotient A/B (as long as B is not equal to zero) and that if two ratios are equivalent, then their values are the same. Students will use the value of a ratio to solve ratio problems in a real-world context.

Agenda:

1. Warm up: Ratio of the Day AND "Simplifying Ratios" Video: <https://www.youtube.com/watch?v=XD1NnVH-BCI> OR <https://www.youtube.com/watch?v=8lyHglPxHYw>
2. Classwork: Engage NY Lesson 8 Exercises 1-3
3. Exit Ticket: *You created a playlist, and 100 of your friends listened to it and shared if they liked the new playlist or not. Drew said the ratio of the number of people who liked the playlist to the number who did not like the playlist is 75:25. Emma said that for every three people who liked the playlist, one person did not. Do Drew and Emma agree? Prove your answer using the values of the ratios.*
4. Homework: Engage NY Lesson 8 Problem Set/Homework

Thursday: Engage NY Lesson 1.9

Objective: Students will understand that a ratio is often used to describe the relationship between the amount of one quantity and the amount of another quantity as in the cases of mixtures or constant rates. Students will understand that a ratio table is a table of equivalent ratios and that they can be used to solve problems.

Agenda

1. Warm up: Ratio of the Day AND “Ratio Tables” Video: <https://www.youtube.com/watch?v=mQYv06QEotw>
2. Classwork: Engage NY Lesson 9 Exercises 1-2
3. Exit Ticket: “Ratio Tables” Exit Slip: *A father and young toddler are walking along the sidewalk. For every 3 steps the father takes, the son takes 5 steps just to keep up. What is the ratio of the number of steps the father takes to the number of steps a son takes? Be sure to add labels and columns to your table, and place the ratio into the first row of data. Add equivalent ratios to build a ratio table.*
4. Homework: Engage NY Lesson 9 Problem Set/Homework

Friday: Engage NY Lesson 1.10

Objective: Students will identify both the additive and multiplicative structure of a ratio table and use the structure to make additional entries in the table. Students will use ratio tables to solve problems.

Agenda:

1. Warm up: Ratio of the Day AND “Additive and Multiplicative Ratio Tables” Video: <https://www.youtube.com/watch?v=HYcMAFFTSdE>
2. Classwork: Engage NY Lesson 10 Exploratory Challenge and Exercise 1
3. Exit Ticket:
4. Homework: Lesson 10 Problem Set/Homework

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