

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.2 Understand the concept of a unit rate a/b associated with a ratio $a:b$ with b not equal to 0, and use rate language in the context of a ratio relationship.	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 NY Lesson 1.11

Objective: Students will solve problems by comparing different ratios using two or more ratio tables.

Agenda:

1. Warm up: Ratio of the Day AND Comparing Ratios using Ratio Tables Videos: https://www.youtube.com/watch?v=u8_qTU3DbLM
2. Classwork: Engage NY Lesson 11 Exercises 1-2
3. Exit Ticket: "Beekeepers" Problem Exit Ticket
4. Homework: Engage NY Lesson 11 Problem Set/Homework

Tuesday: Engage NY Lesson 1-12

Objective: Students create equivalent ratios using a ratio table and represent these ratios on a double number line diagram.

Students will extend and use a double number line diagram to solve ratio problems related to the real world.

Agenda:

1. Warm up: Ratio of the Day AND "Ratio tables to Double Number Lines" Video: <https://www.youtube.com/watch?v=pammNnXs770>
2. Classwork: Engage NY Lesson 12 Exercises 1-5
3. Exit Ticket: *Kyra is participating in a fundraiser walk-a-thon. She walks 2 miles in 30 minutes. If she continues to walk at the same rate, determine how many minutes it will take her to walk 7 miles. Use a double number line diagram to support your answer.*
4. Homework: Engage NY Lesson 12 Problem Set/Homework

Wednesday Engage NY Lesson 1-14

Objective: Students represent ratios as tables, equations, and double number line diagrams and then represent those ratios in a coordinate plane. Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane.

Agenda:

1. Warm up: Ratio of the Day AND “Equal Ratios” Video: https://www.youtube.com/watch?v=VyhRv_MuxvA
2. Classwork: Engage NY Lesson 14 Exercises 1-2 and example 1
3. Exit Ticket: *Dominic works on the weekends and on vacations from school mowing lawns in his neighborhood. For every lawn he mows, he charges \$12. Complete the table, then determine the ordered pairs, and create a labeled graph.*
4. Homework: Engage NY Lesson 14 Problem Set/Homework

Thursday Engage NY Lesson 1-15

Objective: Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane. Given a ratio table, students will plot the ratios in the plane and observe that they lie on the line through the origin and the coordinates in the line satisfy $y=kx$ where k is the value of the associated ratio.

Agenda:

1. Warm up: Ratio of the Day AND “Equivalent Video (a review of equivalent fractions to help relate to finding equivalent ratios and the constant” Video: <https://www.youtube.com/watch?v=vKXqzpz-G0s>
2. Classwork: Engage NY Lesson 15 Exercises 1-7
3. Exit Ticket: “Ratio Tables” Exit Slip: *Explain the advantages and disadvantages of using each of the representations of equivalent ratios: table, double number line, equations, and graphs.*
4. Homework: Engage NY Lesson 15 Problem Set/Homework

Friday Engage NY Lesson 1-16

Objective: Students associate a description of a ratio relationship, such as “5 miles for every 2 hours” to a new quantity, “2.5miles/hour” called a *rate*. Students will be able to identify the unit rate and the rate unit.

Agenda:

1. Warm up: Ratio of the Day AND “Unit Rates” Video: https://www.youtube.com/watch?v=liW_ALj4Qj8 OR https://www.youtube.com/watch?annotation_id=2563e028-aff3-4a3f-bd3d-7bf8dcc45840&feature=cards&src_vid=IBP1TmBXIkY&v=ZeizwRUqgc
2. Classwork: Engage NY Lesson 16 Exploratory Challenge
3. Exit Ticket: *Angela enjoys swimming and often swims at a steady pace to burn calories. At this pace, Angela can swim 1,700 meters in 40 minutes. What is Angela’s unit rate? What is the rate unit?*
4. Homework: Lesson 16 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: Ratio of the Day AND Comparing Ratios using Ratio Tables Videos: https://www.youtube.com/watch?v=u8_qTU3DbLM	Warm Up: Ratio of the Day AND "Ratio tables to Double Number Lines" Video: https://www.youtube.com/watch?v=pammNnXs770	Warm Up: Ratio of the Day AND "Equal Ratios" Video: https://www.youtube.com/watch?v=VyhRv_MuxvA	Warm Up: Ratio of the Day AND "Equivalent Video (a review of equivalent fractions to help relate to finding equivalent ratios and the constant" Video: https://www.youtube.com/watch?v=KXqzpz-G0s	Warm Up: Ratio of the Day AND "Unit Rates" Video: https://www.youtube.com/watch?v=iIW_ALj4Qi8 OR https://www.youtube.com/watch?annotation_id=2563e028-aff3-4a3f-bd3d-7bf8dcc45840&feature=cards&src_vid=IBP1TmBXIkY&v=ZeljzWRUqgc
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 11 Exercises 1-2	Direct Instruction: Engage NY Lesson 1-12 Exercises 1-5	Direct Instruction: Engage NY Lesson 1-14 Exercises 1-2	Direct Instruction: Engage NY Lesson 1-15 Exercises 1-7	Direct Instruction: Engage NY Lesson 1-16 Exploratory Challenge
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 11 Problem Set/Homework	Student Ratio Notes and Homework: Engage NY Lesson 12 Problem Set/Homework	Student Ratio Notes and Homework: Engage NY Lesson 14 Problem Set/Homework	Student Ratio Notes and Homework: Engage NY Lesson 15 Problem Set/Homework	Student Ratio Notes and Homework: Lesson 16 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 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 solve problems by comparing different ratios using two or more ratio tables.	Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane. Given a ratio table, students will plot the ratios in the plane and observe that they lie on the line through the origin and the coordinates in the line satisfy $y=kx$ where k is the value of the associated ratio..	Students represent ratios as tables, equations, and double number line diagrams and then represent those ratios in a coordinate plane. Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane.	Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane. Given a ratio table, students will plot the ratios in the plane and observe that they lie on the line through the origin and the coordinates in the line satisfy $y=kx$ where k is the value of the associated ratio.	Students associate a description of a ratio relationship, such as "5 miles for every 2 hours" to a new quantity, "2.5miles/hour" called a <i>rate</i> . Students will be able to identify the unit rate and the rate unit.

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

Date: Week of October 1, 2017

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.

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

Monday: Engage NY Lesson 1-12

Objective: Students create equivalent ratios using a ratio table and represent these ratios on a double number line diagram. Students will extend and use a double number line diagram to solve ratio problems related to the real world.

Agenda:

5. Warm up: Ratio of the Day AND "Ratio tables to Double Number Lines" Video: <https://www.youtube.com/watch?v=pammNnXs770>
6. Classwork: Engage NY Lesson 12 Exercises 1-5
7. Exit Ticket: *Kyra is participating in a fundraiser walk-a-thon. She walks 2 miles in 30 minutes. If she continues to walk at the same rate, determine how many minutes it will take her to walk 7 miles. Use a double number line diagram to support your answer.*
8. Homework: Engage NY Lesson 12 Problem Set/Homework

Tuesday Engage NY Lesson 1-14

Objective: Students represent ratios as tables, equations, and double number line diagrams and then represent those ratios in a coordinate plane. Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane.

Agenda:

5. Warm up: Ratio of the Day AND "Equal Ratios" Video: https://www.youtube.com/watch?v=VyhRv_MuxvA
6. Classwork: Engage NY Lesson 14 Exercises 1-2 and example 1
7. Exit Ticket: *Dominic works on the weekends and on vacations from school mowing lawns in his neighborhood. For every lawn he mows, he charges \$12. Complete the table, then determine the ordered pairs, and create a labeled graph.*
8. Homework: Engage NY Lesson 14 Problem Set/Homework

Wednesday Engage NY Lesson 1-15

Objective: Students associate with each ratio A:B and the ordered pair (A, B) and plot it in the x-y coordinate plane. Given a ratio table, students will plot the ratios in the plane and observe that they lie on the line through the origin and the coordinates in the line satisfy $y=kx$ where k is the value of the associated ratio.

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6. Classwork: Engage NY Lesson 15 Exercises 1-7
7. Exit Ticket: “Ratio Tables” Exit Slip: *Explain the advantages and disadvantages of using each of the representations of equivalent ratios: table, double number line, equations, and graphs.*
8. Homework: Engage NY Lesson 15 Problem Set/Homework

Thursday Engage NY Lesson 1-16

Objective: Students associate a description of a ratio relationship, such as “5 miles for every 2 hours” to a new quantity, “2.5miles/hour” called a *rate*. Students will be able to identify the unit rate and the rate unit.

Agenda:

5. Warm up: Ratio of the Day AND “Unit Rates” Video: https://www.youtube.com/watch?v=liW_ALj4Qj8 OR https://www.youtube.com/watch?annotation_id=2563e028-aff3-4a3f-bd3d-7bf8dcc45840&feature=cards&src_vid=IBP1TmBXIkY&v=ZeizwRUqgc
6. Classwork: Engage NY Lesson 16 Exploratory Challenge
7. Exit Ticket: *Angela enjoys swimming and often swims at a steady pace to burn calories. At this pace, Angela can swim 1,700 meters in 40 minutes. What is Angela’s unit rate? What is the rate unit?*
8. Homework: Lesson 16 Problem Set/Homework

Friday Engage NY Lesson 1-17

Objective: Given a rate, students will find ratios associated with the rate, including a ratio where the second term is one and a ratio where both terms are whole numbers. Students recognize that all ratios associated to a given rate are equivalent because they have the same value.

Agenda:

1. Warm up: Ratio of the Day AND “Ratios and Unit Rate” Videos: https://www.youtube.com/watch?v=Dv_NVDjG1Rk or <https://www.youtube.com/watch?v=RQ2nYUBVvqI> (Note- this is a repeat from 2 weeks ago to teach UNIT RATES and Associating rates with ratios... or RAP <https://www.youtube.com/watch?v=l1JY3p-1BIQ>
2. Classwork: Engage NY Lesson 17 Examples 1-6
3. Exit Ticket: *Tiffany is filling her daughter’s pool with water from a hose. She can fill the pool at a rate of 1/10 gallons/second. Create at least three equivalent ratios that are associated with the rate. Use a double number line to show your work.*
4. Homework: Engage NY Lesson 17 Problem Set/Homework

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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: Ratio of the Day AND "Ratio tables to Double Number Lines" Video: https://www.youtube.com/watch?v=pammNnXs770	Warm Up: Ratio of the Day AND "Equal Ratios" Video: https://www.youtube.com/watch?v=VyhRv_MuxvA	Warm Up: Ratio of the Day AND "Equivalent Video (a review of equivalent fractions to help relate to finding equivalent ratios and the constant" Video: https://www.youtube.com/watch?v=vKXgzpz-G0s	Warm Up: Ratio of the Day AND "Unit Rates" Video: https://www.youtube.com/watch?v=liW_ALj4Qi8 OR https://www.youtube.com/watch?annotation_id=2563e028-aff3-4a3f-bd3d-7bf8dccc45840&feature=cards&src_vid=IBP1TmBXIkY&v=ZeizwRUqgc	Warm Up: Ratio of the Day AND "Ratios and Unit Rate" Videos: https://www.youtube.com/watch?v=RQ2nYUBVvqI (Note- this is a repeat from 2 weeks ago to teach UNIT RATES and Associating rates with ratios...
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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
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