

Unit 6 Common Core State Standards

6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	6.G.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = L \times W \times H$ and $V = B \times H$ to find the volume of right rectangular prisms.	6.G.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
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Unit 6 Essential Questions:

- What are the similarities and differences of finding the area and perimeter of a 2-dimensional shape compared to the volume and surface area of a 3-dimensional shape?
- What strategies can be used to find the area of non-regular shapes?

Number Sense:

- Odd one out
- Always, Sometimes, Never

Monday Engage NY Lesson 1

Objective: Students show the area formula for the region bounded by a parallelogram by composing it into rectangles. They understand that the area of a parallelogram is the area of the region bounded by the parallelogram.

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 1 Exercises 1-2
3. Homework: Engage NY Lesson 1 Problem Set/Homework

Tuesday Engage NY Lesson 2

Objective: Students justify the area formula for a right triangle by viewing the right triangle as part of a rectangle composed of two triangles.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 2 Exemplary Challenge and Exercises 1-8
6. Homework: Engage NY Lesson 2 Problem Set/Homework

Wednesday Engage NY Lesson 3

Objective: Students show the area formula for a triangular region by decomposing a triangle into right triangles. Students understand that the height of the triangle is the perpendicular segment from a vertex of a triangle to the line containing the opposite side. The opposite side is called the base.

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 3 Examples 1-2 and Exploratory Challenge
3. Homework: Engage NY Lesson 3 Problem Set/Homework
4. Exit Ticket

Thursday Engage NY Lesson 4

Objective: Students construct the altitude for three different cases: an altitude that is a side of a right angle, an altitude that lies over a base, and an altitude that is outside the triangle.

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 4 Exercises and Stations
3. Homework: Engage NY Lesson 4 Problem Set/Homework
4. Exit Ticket

Friday Engage NY Lesson 5

Objective: Students show the area formula for the region bounded by a polygon by decomposing the region into triangles and other polygons. Students find the area for the region bounded by a trapezoid by decomposing the region into two triangles.

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 5 Examples 1-3 and Exercises 1-4
3. Homework: Engage NY Lesson 5 Problem Set/Homework

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

	Monday	Tuesday	Wednesday	Thursday	Friday
Accessing Prior Knowledge - <i>Where</i> are your students headed? Where have they been? How will you make sure the students know where they are going?	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:
Guided Practice - What events will help students <i>experience and explore</i> the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lesson 1	Direct Instruction: Engage NY Lesson 2 Examples 1-8	Direct Instruction: Engage NY Lesson 3	Direct Instruction: Engage NY Lesson 4 Examples 1-8	Direct Instruction: Engage NY Lesson 5 Examples 1-8
Independent Practice - How will you cause students to <i>reflect and rethink</i> ? 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 1 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 2 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 3 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 4 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 5 Problem Set/Homework
Assessing Knowledge - How will you help students to <i>exhibit and self-evaluate</i> 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 <i>tailor</i> 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 <i>demonstrate</i> , as a result of lesson, their level of mastery? <ul style="list-style-type: none"> ● Understand ● Know ● Do 	Students distinguish between statistical questions and those that are not statistical. Students formulate a statistical question and explain what data could be collected to answer the question. Students distinguish between categorical data and numerical data.	Given a dot plot, students begin describing the distribution of the points on the dot plot in terms of center and variability.	Students show the area formula for a triangular region by decomposing a triangle into right triangles. Students understand that the height of the triangle is the perpendicular segment from a vertex of a triangle to the line containing the opposite side. The opposite side is called the base.	Students construct the altitude for three different cases: an altitude that is a side of a right angle, an altitude that lies over a base, and an altitude that is outside the triangle.	Students show the area formula for the region bounded by a polygon by decomposing the region into triangles and other polygons. Students find the area for the region bounded by a trapezoid by decomposing the region into two triangles.

Unit 7 Common Core State Standards

7.NS.1 Apply and extend previous understanding of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	7.NS.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	7.NS.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers is a rational number.
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Unit 7 Essential Questions:

- *What rules can we find to generalize patterns when operations with rational numbers? What connections can we make to operations with whole numbers, fractions and decimals?*
- *How are rational number operations useful in the real world?*

Number Sense:

- *Count around the room*
- *Ways to make a number*
- *Ways to solve a math problem mentally*
- *Organic number line*

Monday Engage NY Lesson 7-9

Objective: Students use properties of operations to add and subtract rational numbers without the use of a calculator.

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 7-9 Examples 1-2 and Exercises 1-3
3. Homework: Engage NY Lesson 7-9 Problem Set/Homework

Tuesday Engage NY Lesson 7-10

Objective: Students practice and justify their understanding of multiplication of integers by using the integer game. Students explain that multiplying by a positive integer is repeated addition and that adding a number multiple times has the same effect as removing the opposite value the same number of times.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 7-10 Examples 1-3 and Exercise 1
6. Homework: Engage NY Lesson 7-10 Problem Set/Homework

Wednesday Engage NY Lesson 7-11

Objective: Students understand the rules for multiplication of integers and that multiplying the absolute values of integers results in the absolute value of the product. The sign, or absolute value, of the product is positive if the factors have the same sign and negative if they have opposite signs.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 7-11 Exercise 1 and example 1
9. Homework: Engage NY Lesson 7-11 Problem Set/Homework

Thursday Engage NY Lesson 7-12

Objective: Students recognize that division is the reverse process of multiplication and that integers can be divided provided the divisor is not zero. Students understand that every quotient of integers is a rational number and divide signed numbers by dividing their absolute values to get the absolute value of the quotient.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 7-12 Examples 1-2 and Exercises 1-3
12. Homework: Engage NY Lesson 7-12 Problem Set/Homework

Friday Engage NY Lesson 7-13

Objective: Students understand that the context of a real-life situation often determines whether a rational number should be represented as a fraction or as a decimal.

13. Warm up: Ways to Make a Number AND Video:
14. Classwork: Engage NY Lesson 7-13 Examples 1-3 and Exercises 1-2
15. Homework: Engage NY Lesson 7-13 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: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video: :	Warm up: Ways to Make a Number 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 Lessons: 7-9	Direct Instruction: Engage NY Lessons: 7-10	Direct Instruction: Engage NY Lessons: 7-11	Direct Instruction: Engage NY Lessons 7-12	Direct Instruction: Engage NY Lessons 7-13
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 7-9 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-10 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-11 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-12 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-13 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? <ul style="list-style-type: none"> ● Understand ● Know ● Do 	Students use properties of operations to add and subtract rational numbers without the use of a calculator.	Students practice and justify their understanding of multiplication of integers by using the integer game. Students explain that multiplying by a positive integer is repeated addition and that adding a number multiple times has the same effect as removing the opposite value the same number of times.	Students understand the rules for multiplication of integers and that multiplying the absolute values of integers results in the absolute value of the product. The sign, or absolute value, of the product is positive if the factors have the same sign and negative if they have opposite signs.	Students recognize that division is the reverse process of multiplication and that integers can be divided provided the divisor is not zero. Students understand that every quotient of integers is a rational number and divide signed numbers by dividing their absolute values to get the absolute value of the quotient.	Students understand that the context of a real-life situation often determines whether a rational number should be represented as a fraction or as a decimal.