

**Unit 5 Common Core State Standards**

<b>6.G.1</b> 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.	<b>6.G.2</b> 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.	<b>6.G.3</b> 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.	<b>6.G.4</b> 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 5 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

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**Monday Engage NY Lesson 5.1**

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 5.2**

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 5.3**

Objective: Students show the area formula for a triangular region by decomposing a triangle into right triangles. For a given triangle, the height of the triangle is the length of the altitude. The length of the base is called either the length base or, more commonly, the base. 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 understand that any side of a triangle can be considered a base and that the choice of base determines the height.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 3 Exercises 1-5
9. Homework: Engage NY Lesson 3 Problem Set/Homework

## **Thursday Engage NY Lesson 5.4**

Objective: Students construct the altitude for three different cases: an altitude that is a side of a right angle, an altitude that lies over the base, and an altitude that is outside the triangle. Students deconstruct triangles to justify that the area of a triangle is exactly one half the area of a parallelogram.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 4 Exercises 1-8
12. Homework: Engage NY Lesson 4 Problem Set/Homework

## **Friday Engage NY Lesson 5.5**

Objective: Students show the area formula for the region bounded by a polygon by decomposing the region into triangles and other polygons. They understand that the area of a polygon is actually the area of the region bounded by the polygon. Students find the area for the region into two triangles. They understand that the area of a trapezoid is actually the area of the region bounded by the trapezoid. Students decompose rectangles to determine the area of other quadrilaterals.

13. Warm up: Ways to Make a Number AND Video:
14. Classwork: Engage NY Lesson 5 Examples 1-3
15. Homework: Engage NY Lesson 5 Problem Set/Homework

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

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Accessing Prior Knowledge - Where</b> 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: :
<b>Guided Practice</b> - What events will help students <b>experience and explore</b> the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lesson 5.1	Direct Instruction: Engage NY Lesson 5.2 Examples 1-8	Direct Instruction: Engage NY Lesson 5.3 Examples 1-4	Direct Instruction: Engage NY Lesson 5.4 Examples 1-2 and Exercises 1-6	Direct Instruction: Engage NY Lessons 5.5
<b>Independent Practice</b> - How will you cause students to <b>reflect and rethink</b> ? 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 5-1 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 5-2 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 5-3 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 5-4 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 5-5 Problem Set/Homework
<b>Assessing Knowledge</b> - How will you help students to <b>exhibit and self-evaluate</b> 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
<b>Differentiation/Accommodation</b> - How will you <b>tailor</b> 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
<b>Learner Outcome</b> - How will students <b>demonstrate</b> , as a result of lesson, their level of mastery? <ul style="list-style-type: none"> <li>● Understand</li> <li>● Know</li> <li>● Do</li> </ul>	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.	Students justify the area formula for a right triangle by viewing the right triangle as part of a rectangle composed of two triangles.	Students show the area formula for a triangular region by decomposing a triangle into right triangles. For a given triangle, the height of the triangle is the length of the altitude. The length of the base is called either the length base or, more commonly, the base. 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 understand that any side of a triangle can be considered a base and that the choice of base determines the height.	Students construct the altitude for three different cases: an altitude that is a side of a right angle, an altitude that lies over the base, and an altitude that is outside the triangle. Students deconstruct triangles to justify that the area of a triangle is exactly one half the area of a parallelogram.	Students show the area formula for the region bounded by a polygon by decomposing the region into triangles and other polygons. They understand that the area of a polygon is actually the area of the region bounded by the polygon. Students find the area for the region into two triangles. They understand that the area of a trapezoid is actually the area of the region bounded by the trapezoid. Students decompose rectangles to determine the area of other quadrilaterals.

**Unit 7 Common Core State Standards (ALL)**

<p><b>7.RP.1</b> Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.</p>	<p><b>7.RP.2a</b> Decide whether two quantities are in a proportional relationship, e.g. by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.</p>	<p><b>7.RP.2b</b> Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p>	<p><b>7.RP.2c</b> Represent proportional relationships by equations. For example, if total cost <math>t</math> is proportional to the number <math>n</math> of items purchased at a constant price <math>p</math>, the relationship between the total cost and the number of items can be expressed as <math>t=pm</math></p>	<p><b>7.RP.2d</b> Explain what a point <math>(x,y)</math> on a graph of a proportional relationship means in terms of the situation, with special attention to the points <math>(0,0)</math> and <math>(1, r)</math> where <math>r</math> is the unit rate.</p>	<p><b>7.G.1</b> Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.</p>
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**Unit 7 Essential Questions:**

- How can you determine if a relationship is proportional or non-proportional from a table, graph, equation, and verbal description?
- How are scale drawings useful in the real world?

**Number Sense:**

- Number Talk
  - Ways to make a function from a given solution (only make proportional)
  - Always, Sometimes, Never
  - Odd One Out
  - What's my rule?
  - Visual Patterns
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### **Monday Engage NY Lesson 7.1.9**

Objective: Students use the constant of proportionality to represent proportional relationships by equations in real-world contexts as they relate the equations to a corresponding ratio table or graphical representation.

Agenda:

1. Warm up: Rate of the Day AND Video:
2. Classwork: Engage NY Lesson 7.1.9
3. Homework: Engage NY Lesson 7.1.9 Problem Set/Homework

### **Tuesday Engage NY Lesson 7.1.10**

Objective: Students consolidate their understanding of equations representing proportional relationships as they interpret what points on the graph of a proportional relationship mean in terms of the situation or context of the problem, including the point (0,0) .

Students are able to identify and interpret in context the point (1,r) on the graph of a proportional relationship where r is the unit rate.

Agenda:

1. Warm up: Rate of the Day AND Video:
2. Classwork: Engage NY Lesson 7.1.10
3. Homework: Engage NY Lesson 7.1.10 Problem Set/Homework

### **Wednesday Engage NY Lesson 7.1.11 AND 7.1.12**

Objective: 7.1.11 Students use ratio tables and ratio reasoning to compute unit rates associated with ratios of fractions in the context of measured quantities such as recipes, lengths, areas, and speed. Students work collaboratively to solve a problem while sharing their thinking processes, strategies, and solutions with the class. 7.1.12 Students use ratio tables and ratio reasoning to compute unit rates associated with ratios of fractions in the context of measured quantities, such as recipes, lengths, areas, and speed. Students use unit rates to solve problems and analyze unit rates in the context of the problem.

Agenda:

1. Warm up: Rate of the Day AND Video:
2. Classwork: Engage NY Lesson 7.1.11 AND 7.1.12
3. Homework: Engage NY Lesson 7.1.11 AND 7.1.12 Problem Set/Homework

### **Thursday Engage NY 7th Grade Unit 1 Mid Module Check/TEST**

### **Friday Engage NY Lesson 7.1.14**

Objective: Students solve multi-step ratio problems including fractional markdowns, markups, commissions, and fees.

Agenda:

4. Warm up: Rate of the Day AND Video:
5. Classwork: Engage NY Lesson 7.1.14
6. Homework: Engage NY Lesson 7.1.14 Problem Set/Homework

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

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Accessing Prior Knowledge</b> - <b>Where</b> are your students headed? Where have they been? How will you make sure the students know where they are going?	Warm up: Rate of the Day AND Video:	Warm up: Rate of the Day AND Video:	Warm up: Rate of the Day AND Video:	Warm up: Rate of the Day AND Video: :	Warm up: Rate of the Day AND Video:
<b>Guided Practice</b> - What events will help students <b>experience and explore</b> the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lessons: 7.1.9	Direct Instruction: Engage NY Lessons: 7.1.10	Direct Instruction: Engage NY Lessons: 7.1.11 AND 7.1.12	Direct Instruction: 7th Grade Module 1 Mid-Unit Check/Test	Direct Instruction: Engage NY Lesson: 7.1.14
<b>Independent Practice</b> - How will you cause students to <b>reflect and rethink</b> ? 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 7.1.9 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.1.10 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.1.11 AND 7.1.12 Problem Set/Homework	Student Notes and Homework: Khan Academy	Student Notes and Homework: Engage NY Lesson 7.1.14 Problem Set/Homework
<b>Assessing Knowledge</b> - How will you help students to <b>exhibit and self-evaluate</b> 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
<b>Differentiation/Accommodation</b> - How will you <b>tailor</b> 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
<b>Learner Outcome</b> - How will students <b>demonstrate</b> , as a result of lesson, their level of mastery? <ul style="list-style-type: none"> <li>• Understand</li> <li>• Know</li> <li>• Do</li> </ul>	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.	Students justify the area formula for a right triangle by viewing the right triangle as part of a rectangle composed of two triangles.	Students show the area formula for a triangular region by decomposing a triangle into right triangles. For a given triangle, the height of the triangle is the length of the altitude. The length of the base is called either the length base or, more commonly, the base. 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 understand that any side of a triangle can be considered a base and that the choice of base determines the height.	Students construct the altitude for three different cases: an altitude that is a side of a right angle, an altitude that lies over the base, and an altitude that is outside the triangle. Students deconstruct triangles to justify that the area of a triangle is exactly one half the area of a parallelogram.	Students show the area formula for the region bounded by a polygon by decomposing the region into triangles and other polygons. They understand that the area of a polygon is actually the area of the region bounded by the polygon. Students find the area for the region into two triangles. They understand that the area of a trapezoid is actually the area of the region bounded by the trapezoid. Students decompose rectangles to determine the area of other quadrilaterals.