

Pre-AP 6th Grade Math Curriculum Bundle # 3

Title	Suggested Dates
Equivalent Forms of Rational Numbers to Compare and Order	October 5 – October 23 (14 days)

Big Idea/Enduring Understanding	Guiding Questions
The value of a fraction is dependent upon the size of the whole.	<ol style="list-style-type: none"> 1. What are the different ways to model a fraction in relation to a real life situation? 2. Describe the properties of a fraction and how they relate to a given situation. (money, food, sports, etc) 3. How can equivalent forms of a fractional value be generated?
Benchmark fractions provide opportunities to estimate size, determine value, and compare and order fractions.	<ol style="list-style-type: none"> 1. How can benchmarks be used to compare values of given fractions? 2. What does the relationship between the numerator and denominator tell you about the value of a fraction in comparison to a benchmark fraction?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
<p>6.1 Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</p> <p>6.1A compare and order non-negative rational numbers</p> <p><i>Note: All forms of non-negative rational numbers, introducing decimals</i></p>	<ul style="list-style-type: none"> • use the following forms of non-negative rational numbers: <ul style="list-style-type: none"> ○ fractions with like & unlike denominators - unit, proper, improper, mixed numbers ○ decimals • arrange fractions from “least to greatest” and “greatest to least” <ul style="list-style-type: none"> ○ real number applications speed “fastest/slowest” • use a variety of forms in real world applications • arrange fractions and decimals on a number line 	<p>CMP2 Bits and Pieces I Pearson Investigations 1, 2, 3, 4</p>	<p>PH: Lessons 1-6, 4-8, 4-9</p> <p>Region IV: “Equivalent Rational Number Lesson” pp. 17-30</p> <p>Understanding Math Understanding Fractions: Topic 1</p>
<p>6.1 Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</p> <p>6.1B generate equivalent forms of rational numbers including whole numbers, fractions, and decimals</p> <p><i>Note: All forms of positive rational numbers,</i></p>	<ul style="list-style-type: none"> • use the following forms of rational numbers and generate equivalent forms of: <ul style="list-style-type: none"> ○ fractions – connect simplifying back to both prime factorization and GCF ○ mixed numbers, proper and improper fractions ○ decimals – equivalent forms of decimals (tenths, hundredths, thousandths) to 	<p>CMP2 Bits and Pieces I Pearson Investigations 1, 2, 3, 4</p>	<p>PH: Lessons 4-5, 4-6, 4-8, 4-9, 7-6</p> <p>Understanding Math Understanding Fractions: Topic 2, Topic 3</p>

Pre-AP 6th Grade Math Curriculum Bundle # 3

<p>decimals</p>	<p>fractions and simplify fractions to decimals by finding an equivalent fraction with a denominator of 10, 100, or 1000</p> <ul style="list-style-type: none"> • use a variety of forms in real world applications equivalent fraction with a denominator of • identify placement of fractions and decimals related to benchmarks (0, .5 / ½, 1) 		
<p>6.3 Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.</p> <p>6.3B represent ratios and percents with concrete models, fractions, and decimals</p>	<ul style="list-style-type: none"> • conversions of fractions, decimals and percents between all forms • simplify ratios expressed with fractions • represent ratios as proper or improper fractions, decimals, and percents • include percents over 100% and less than 1% • use pictures and models to express ratios • stress the use of benchmarks; 1/10, 1/5, ¼, 1/3, ½ • use models of length and hands-on measurements to express ratios using metric and customary units 		<p>PH: Lessons 7-1, 7-5, 7-6</p> <p>TEX Team Numerical Reasoning: “Percent Benchmarks”</p> <p>TEX Team Proportionality: “Reflect & Apply”</p> <p>Understanding Math Understanding Percent: Topic 1</p> <p>Accelerated Curriculum 6th Unit 5 Lesson 1 and 2</p> <p>Closing the Distance 6th Lesson 1 pg. 1-18</p> <p>AIRR 6th grade Activity #107-122</p>
<p>7.1 Number, operation, and quantitative reasoning. The student represents and uses numbers in a variety of equivalent forms.</p> <p>7.1B convert between fractions, decimals, whole numbers, and percents mentally, on paper, or with a calculator</p>	<ul style="list-style-type: none"> • use multiple forms in real world applications • convert percents greater and less than 100% to fraction and decimal forms • use only positive numbers • Use the following forms of numbers: <ul style="list-style-type: none"> ○ Mixed numbers ○ Proper & Improper fractions ○ Convert fractions to decimals by dividing (terminating and repeating) ○ Complex fractions (such as 20.4/100) • use pictorial representation 		<p>PH Textbook- 7th grade Chapter 2. 6a (lab) Chapter 2.6</p> <p>AIRR 7th Grade Activity #31 and #33</p> <p>Region IV Equivalence Lesson</p> <p>Understanding Math Understanding Fractions: Topic 4, Topic 6 Understanding Percent: Topic 2, Topic 3</p>

Pre-AP 6th Grade Math Curriculum Bundle # 3

<p>6.2 Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve problems and justify solutions.</p> <p>6.2D estimate and round to approximate reasonable results and to solve problems where exact answers are not required</p>	<ul style="list-style-type: none"> • information/numbers expressed as ranges or solutions expressed as ranges • use strategies for estimation (compatible numbers, rounded numbers) • round all numbers in the set to largest place value of the smallest number in a series of numbers keeping the value of single digits • round money to the nearest cent and dollar • round a number to a place value from billions to hundredths (1,000,000,000.00) • Present the information in various forms (tables, charts, etc.) 		<p>PH: Lessons 1-2, 1-7, 5-1, 5-3, 5-4</p>
<p>7.1 Number, operation, and quantitative reasoning. The student represents and uses numbers in a variety of equivalent forms.</p> <p>7.1A compare and order integers and positive rational numbers</p> <p>Note: Focus on positive rational numbers</p>	<ul style="list-style-type: none"> • arrange multiple forms on a number line • identify multiple equivalent forms ($2.4/100 = 24/1000=3/125=0.024=2.4\%$) • use the following forms of positive rational numbers: <ul style="list-style-type: none"> o fractions with like & unlike denominators - unit, proper, improper, mixed numbers o percents- greater and less than 100% o decimals • extract multiple forms of data from tables • discuss rational versus irrational • find a number between two given numbers (could be multiple forms or like forms) • discuss ordering values in real life situations where “fastest time” would be the least value: racing times, golf, etc. 		<p>PH Textbook- 7th grade Chapter 1.6</p>
<p>6.7 Geometry and spatial reasoning. The student uses coordinate geometry to identify location in two dimensions.</p> <p>6.7 The student is expected to locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers.</p> <p>Note: Scales using rational numbers</p>	<ul style="list-style-type: none"> • use only first quadrant • use a variety of grids (<u>using different incremental units</u>) • locate points using fraction and decimal coordinates 		<p>PH: Lesson 11-8</p> <p>Region IV: pp. 28-29</p> <p>AIRR 6th grade Activity #169-173</p> <p>LTF Maximums, minimums, and Intervals –Oh My! (new – available on-line)</p>