

8th Grade Math Curriculum Bundle # 4

Course or Grade Level: EIGHTH		Calendar (Weeks 11, 12, and 13) Bundle 4		
Content	TAKS OBJ	TEKS Knowledge & Skills	TEKS Student Expectation	Specification/Examples
		<p><i>8.1 Number, operation, and quantitative reasoning. The student understands that different forms of numbers are appropriate for different situations.</i></p> <p><i>8.2 Number, operation, and quantitative reasoning. The student selects and uses appropriate operations to solve problems and justify solutions.</i></p>	<p>8.1(B) Select and use appropriate forms of rational numbers to solve real-life problems including those involving proportional relationships. (Supporting)</p> <p>8.2(C) Evaluate a solution for reasonableness. (Supporting)</p>	<p>8.1(B) Including but not limited to:</p> <ul style="list-style-type: none"> select and use a variety of forms of rational numbers within a problem to solve real-world applications in the form of fractions, percents, and decimals conversions between fractions, decimals, and percents. Examples: $\frac{1}{2} = .5 = 50\%$ use rational numbers in the forms of: <ul style="list-style-type: none"> fractions, mixed numbers, proper and improper fractions (with like and unlike denominators) decimals ratios <p>8.1(B) Vocabulary:</p> <p>ratio proportion proportional/non-proportional rate of change equivalent simplify lowest terms least common denominator greatest common factor simplest form reciprocal</p> <p>8.2(C) Including but not limited to:</p> <ul style="list-style-type: none"> discuss appropriate labels/units for solutions use mathematical reasoning and numerical value to justify solution use of estimation throughout process apply measurement conversions within a system

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			<p>8.2(D) Use multiplication by a given constant factor (including unit rate) to represent and solve problems involving proportional relationships including conversions between measurement systems. (Supporting)</p> <p>Note: NEW – This TEKS has changed – conversions between measurement systems are a new requirement this year.</p> <p>8.3(A) Compare and contrast proportional and non-proportional linear relationships. (Supporting)</p>	<ul style="list-style-type: none"> • use of ranges to make estimations <p>8.2(C) Vocabulary:</p> <ul style="list-style-type: none"> • reasonableness • compatible numbers • estimation • justify • range (used for estimation) <p>8.2(D) Including but not limited to:</p> <ul style="list-style-type: none"> • utilize customary and metric conversions <u>within</u> a system (conversion factor) and <u>between</u> systems • select/write equations that represent a situation <p>including, but not limited to, real world situations such as speed, density, time, price, and recipes</p> <ul style="list-style-type: none"> • discuss appropriate labels and units <p>8.2(D) Vocabulary: variable proportional unit rate scale factor ratio constant rate of change constant per</p> <p>8.3(A) Including but not limited to:</p> <ul style="list-style-type: none"> • identify proportional and non-proportional with tables, graphs and equations • relate a proportional equation that correlates with a real world situation • represent ratios that may not be in lowest terms in a table, graph, equation, verbal description or geometric representations
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8.3 Patterns, relationships, and algebraic thinking. The student identifies proportional or non-proportional linear relationships in problem situations and solves problems.

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		<p><i>8.3 Patterns, relationships, and algebraic thinking. The student identifies proportional or non-proportional linear relationships in problem situations and solves problems.</i></p>	<p>8.3(B) Estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates. (Readiness)</p>	<ul style="list-style-type: none"> • set up a proportion problem from a verbal description • use data in a table • use standard and metric units • apply unit conversions and unit rates <p>8.3(A) Vocabulary: constant rate of change scale factor unit rate linear relationship proportional non-proportional equivalent</p> <p>8.3(B) Including but not limited to:</p> <ul style="list-style-type: none"> • include real world situations such as tax, sale price, % change (increase and decrease), mark-up/discount, commission, and simple interest • set up a proportion problem from a verbal description and solve • use data in a table • use standard and metric units • apply unit conversions • discuss appropriate labels/units • percent and proportion equation <p>8.3(B) Vocabulary: scale factor similarity proportional non-proportional scale drawing percent of increase percent of decrease</p>
		<p><i>8.6 Geometry and spatial reasoning. The student uses transformational geometry to develop spatial sense.</i></p>	<p>8.6(A) Generate similar figures using dilations including enlargements and reductions. (Readiness)</p>	<p>8.6(A) Including but not limited to:</p> <ul style="list-style-type: none"> • label dilations with 'prime notation' • find the scale factor based on

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		<p>8.6 Geometry and spatial reasoning. <i>The student uses transformational geometry to develop spatial sense.</i></p>	<p>8.6(B) Graph dilations, reflections, and translations on a coordinate plane. (Supporting)</p>	<p>enlarged/reduced figures and vice versa</p> <ul style="list-style-type: none"> • use scale factor to create similar figures • graph figures on a coordinate grid • find missing dimensions using figures with similar dimensions • mark similar sides and angles on created figures and originals <p>8.6(A) Vocabulary: similar (~) dilation enlargement reduction dimension proportional scale factor congruent (\cong) corresponding sides prime notation Ex: A' corresponding angles image original</p> <p>8.6(B) Including but not limited to:</p> <ul style="list-style-type: none"> • use all four quadrants • reflect across the x- or y-axis • translate horizontally and/or vertically using verbal descriptions or rules • dilate with enlargements and reductions • use scale factors to dilate <p>8.6(B) Vocabulary: transformation reflection rotation translation horizontal vertical prime notation A'</p>
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		8.9 Measurement. The student uses indirect measurement to solve problems.	8.9(B) Use proportional relationships in similar two-dimensional figures or similar three-dimensional figures to find missing measurements. (Readiness)	<p>dilation (enlargement, reduction) scale factor</p> <p>8.9(B) Including but not limited to:</p> <ul style="list-style-type: none"> • set up proportions to find missing measurements • use a scale factor (greater than, less than, and equal to 1) to find missing measurements • identify the corresponding sides/angles of similar figures when the figure is/is not rotated <p>8.9(B) Vocabulary: similar scale factor dimensions transformation proportional corresponding angles corresponding sides ratio</p>
Process	TAKS OBJ	TEKS Knowledge & Skills	TEKS Student Expectation	Specification/Examples
	6	8.14 Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.	<p>8.14(A) Identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics.</p> <p>8.14(B) Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.</p> <p>8.14(C) Select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a</p>	

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		<p>problem.</p> <p>8.14(D) Select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.</p> <p>8.15(A) Communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.</p> <p>8.15(B) Evaluate the effectiveness of different representations to communicate ideas.</p> <p>8.16(A) Make conjectures from patterns or sets of examples and non-examples.</p> <p>8.16(B) Validate his/her conclusions using mathematical properties and relationships.</p>	
	<p><i>8.15 Underlying processes and mathematical tools. The student communicates about Grade 8 mathematics through informal and mathematical language, representations and models.</i></p> <p><i>8.16 Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.</i></p>		
Language of Instruction	Technology TEKS/Product	Primary Resource Reference	Secondary Resource Reference
	<ul style="list-style-type: none"> • ..\Hyperlinks for Each Bundle\Bundle 1 Hyperlinks\8.1B Fraction Decimal Percent.notebook • ..\Hyperlinks for Each Bundle\Bundle 4 Hyperlinks\Plane figures.notebook • ..\Hyperlinks for Each Bundle\Bundle 4 Hyperlinks\Shape Creator.notebook 	<p>HOLT:</p> <p>8.1B: 5-4, 5-8</p> <p>8.2C: none</p> <p>8.2D: 5-2, 5-6</p> <p>8.3A: 5-1</p> <p>8.3B: 5-3, 6-2, 6-3, 6-4, 6-5, 6-6, 6-7</p> <p>8.6A: 5-5</p> <p>8.6B: 7-7</p> <p>8.9B: 5-5, 5-7, 5-8 Lab</p>	<p>Measuring Up Lessons:</p> <p>8.1B: 7</p> <p>8.2C: 1, 2, 3, 4, 11, 12</p> <p>8.2D: 7, 9, 27</p> <p>8.3A: 9</p> <p>8.3B: 6, 7, 8, 11, 12</p> <p>8.6A: 37</p> <p>8.6B: 37, 38, 39</p> <p>8.9B: 49</p> <p>AIRR Out Book Activities:</p> <p>8.1B: 22-40</p> <p>8.2C: 73-76</p> <p>8.2D: 97-78</p> <p>8.3A: 80-85</p> <p>8.3B: 86-109</p> <p>8.6A: 135-142</p>

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			8.6B: 143-150 8.9B: 231-234
Student Performance <ul style="list-style-type: none">• Assessments<ul style="list-style-type: none">○ Textbook assessment○ Common assessment○ Benchmark○ TAKS○ Advanced Placement• Lab• Project• Essay• Short answer response• Applying mathematics	Formative	Summative	
Intervention	Outline specific interventions for different learning needs: <ul style="list-style-type: none">• Reteach options for non-mastery• Scaffolds for ELLs• Differentiation for struggling learners Identify specific resources and teaching tools/ideas for intervention (grouping, pacing). Introduction-level standards include tier 2 interventions. Interventions for tested include both tier 2 and 3 focused small group interventions. Interventions for reviewed standards include more tier 3 focused small groups and individualized intervention.		
Other Curricular Connection (ELA, Math, SS)	The TEKS social studies strand for science and technology should be the first source to connect math concepts with the history of mathematics and contributions of mathematicians.		