

7th grade Math

Curriculum Guide

To support strong classroom instruction, the TDOE has created instructional focus documents for mathematics. These documents were developed to target the mathematics standards where statewide data indicated students struggled the most and are optional supplements for educators to consider. The purpose of these documents is to provide teachers with examples of learning across all performance levels to help educators determine the depth of a student's conceptual understanding of the Tennessee mathematics standards. You may access these documents using the **Best for All Central** website:

<https://bestforall.tnedu.gov/lessons-and-learning-item?content-id=7321>

** All lessons have differentiated intervention and lesson quizzes ** All major assessments can be found in the assessment workbook and online*

1 st Quarter				
Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
3.OA.C.7 5.NBT.A.3 6.NS.A 6.NS.B 6.NS.C 6.RP.A	I can apply previous mathematical concepts.	Volume 1 - pg 2F	Topic 1 Readiness Assessment	1 day
7.NS.A.1.a	I can understand how integers and their opposites are related.	Volume 1 Topic 1-1: Relate Integers and Their Opposites - pgs. 9-14		1 days
7.NS.A.2.d	I can identify rational numbers and write them in decimal form.	Volume 1 Topic 1-2: Understand Rational Numbers - pgs 15-20 Vocabulary: repeating decimal, terminating decimal		1 days
7.NS.A.1.a 7.NS.A.1.c	I can add positive and negative integers I can model integer addition in real-life applications.	Volume 1 Topic 1-3: Add Integers - pg. 21-26 Vocabulary: additive inverse		3 days

7.NS.A.1.b 7.NS.A.1.c	I can understand subtraction of integers as adding the additive inverse, $p - q = p + (-q)$	Volume 1 Topic 1-4: Subtract Integers - pgs 27-32		3 days
7.NS.A.1.a 7.NS.A.1.b 7.NS.A.1.c	I can apply properties of operations to add and subtract rational numbers	Volume 1 Topic 1-5: Add and Subtract Rational Numbers - pgs 33-38		3 days
Mid-point Topic Assessment: 7.NS.A.1 7.NS.A.2.d	I can demonstrate my understanding of operations with positive and negative integers.	Volume 1: Topic 1 Lessons 1 thru 5 - pgs 39-40	Mid-point Topic Checkpoint & Performance Task	1 day
7.NS.A.2.a 7.NS.A.2.c	I can multiply positive and negative integers and apply to real-life applications	Volume 1 Topic 1-6: Multiply Integers - pgs 41-46		2 day
	I can find the product of rational numbers.	Volume 1 Topic 1-7: Multiply Rational Numbers - pgs 47-52		2 days
7.NS.A.2.b 7.NS.A.2.c	I can understand how to divide integers by applying the rules of multiplying integers I can determine equivalencies among integer quotients.	Volume 1 Topic 1-8: Divide Integers - pgs 53-58		2 days
	I can understand how the signs of integers in a multiplication sentence relate to the signs in a related division statement	Volume 1 Topic 1-9: Divide Rational Numbers - pgs 59-64 Vocabulary: complex fraction, multiplicative inverse		2 days
7.NS.A.3 7.EE.B.3	I can decide which operations to use to solve problems with rational numbers.	Volume 1 Topic 1-10: Solve Problems with Rational Numbers - pgs 65-70		2 days
End of Topic 1 Assessments: 7.NS.A	I can apply and extend previous understandings of operations with fractions	End of Topic 1: Rational Number Operations - pgs 76-80 - pgs 81A-D	Topic Review Topic 1 Assessment/ Performance Task A & B	2 days
6.RP.A.1-3	I can apply previous knowledge of ratios and proportions.	Volume 1 Topic 2 - pg. 82F	Topic 2 Readiness Assessment	1 day

7.RP.A.1 7.RP.A.3	I can use ratios and rates to describe the relationship between two quantities.	Volume 1 Topic 2-1: Connect Ratios, Rates, and Unit Rates - pgs 89-94		2 days
	I can find equivalent ratios and use unit rates to solve multi-step problems. I can find unit rates with ratios of fractions. I can use unit rates to solve multi-step problems.	Volume 1 Topic 2-2: Determine Unit Rates with Ratios of Fractions - pgs 95-100		2 days
7.RP.A.2.a	I can determine whether quantities are proportional by testing for equivalent ratios.	Volume 1 Topic 2-3: Understand Proportional Relationships: Equivalent Ratios - pgs 101-106 <i>Vocabulary: Proportional Relationship, Proportion</i>		2 days
7.RP.A.2.b 7.RP.A.2.c	I can use the constant of proportionality to write equations that represent proportional relationships. I can use equations to solve problems involving proportional relationships.	Volume 1 Topic 2-4: Describe Proportional Relationships: Constant of Proportionality - pgs 107- 112 <i>Vocabulary: Constant of Proportionality</i>		2 days
Mid-point Topic Assessment: 7.RP.A.1-3		Volume 1: Topic 2 lessons 1 thru 4 - pgs 113 - 114	Mid- point Topic Checkpoint/Performance Task	1 day
7.RP.A.2.a 7.RP.A.2.b 7.RP.A.2.d	I can use a graph to recognize proportionality. I can identify a constant of proportionality from a graph. I can interpret a point on a graph of a proportional relationship.	Volume 1 Topic 2-5: Graph Proportional Relationships - pgs 119 - 124		2 days
7.RP.A.2 7.RP.A.3	I can explain whether a situation represents a proportional relationship. I can use representations to find entry points into problems.	Volume 1 Topic 2-6: Apply Proportional Reasoning to Solve Problems - pgs 125 - 130		2 days
End of Topic 2 Assessments: 7.RP.A	I can analyze proportional relationships and use them to solve real-world and mathematical problems.	End of Topic 2: Analyze and Use Proportional Relationships - pgs 131- 135E	Topic 2 Review Topic 2 Assessment Performance Task A & B Cumulative Assessment (<i>Topics 1 & 2</i>)	2-4 days

2nd Quarter

Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Timeframe
6.RP.A 6.NS.A.1 6.NS.B.3	I can apply previous mathematical concepts of the number system.	Volume 1 Topic 3 - pg 136F	Topic 3 Readiness Assessment	1 day
7.RP.A.3	I can understand that equivalent rates can be used to find percents. I can analyze percents of numbers in a real-world context.	Volume 1 Topic 3-1: Analyze Percents of Numbers - pg 143-148		2 days
7.RP.A.2.c 7.RP.A.3	I can construct a percent proportion. I can use percent proportion to find an unknown part, whole, or percent.	Volume 1 Topic 3-2: Connect Percent and Proportion - pg 149-154		2 days
	I can understand the relationship between proportional reasoning and percent. I can interpret the results of a percent equation in a real-life scenario.	Volume 1 Topic 3-3: Represent and Use the Percent Equation - pg 155-160 Vocabulary: percent equation		2 days
Mid-point Topic Assessment: 7.RP.A.2.c 7.RP.A.3		Volume 1 Topic 3 lessons 1 thru 4 - pg 161-162	Mid-topic Checkpoint/Performance Task	1 day
7.RP.A.3	I can solve real-world problems involving percent change and percent error. I can understand the percent equation and the different ways it can be used.	Volume 1 Topic 3-4: Solve Percent Change and Percent Error Problems - pg 163-168 Vocabulary: percent change, percent error		2 days
	I can understand and calculate markups and markdowns. I can relate percent change to percent markup and markdown.	Volume 1 Topic 3-5: Solve Markup & Markdown Problems - pg 173-178 Vocabulary: markup, markdown, percent markup, percent markdown		2 days

7.RP.A.3	I can identify the parts of interest problems and how the values are related I can understand what simple interest is and how it is calculated.	Volume 1 Topic 3-6: Solve Simple Interest Problems - pg 179-184 Vocabulary: interest rate, principal, simple interest		2 days
End of Topic 3 Assessments: 7.RP.A.2-3		End of Topic 3: Analyze and Solve Percent Problems - pg 185-189D	Topic 3 Review Topic 3 Assessment/ Performance Task A & B	2 days
6.EE.A 6.EE.A.3 6.EE.A.4 6.G.A.1 7.NS.A.3	I can apply previous mathematical concepts on expressions.	Volume 1 Topic 4 - pg 190F	Readiness Assessment	1 day
7.EE.B.3 7.EE.B.3.a 7.EE.B.4	I can understand how variables are used to represent unknown values in problems.	Volume 1 Topic 4-1: Write and Evaluate Algebraic Expressions - pg 197-202		2 days
7.EE.A.1	I can recognize when two expressions are equivalent	Volume 1 Topic 4-2: Generate Equivalent Expressions - pg 203-208		2 days
	I can use properties of operations to write equivalent expressions. I can combine like integer and rational terms.	Volume 1 Topic 4-3: Simplify Expressions - pg 209-214		2 days
7.EE.A.1 7.EE.A.2	I can use the Distributive Property to expand expressions.	Volume 1 Topic 4-4: Expand Expressions - pg 215-220		2 days
	I can understand expanding an expression is the reverse of factoring.	Volume 1 Topic 4-5: Factor Expressions - pg 221-226		2 days
	I can identify the GCF of algebraic terms in expressions.			
Mid-point Topic Assessment: 7.EE.A.1-2 7.EE.B.3-4		Volume 1 Topic 4 lessons 1 thru 5 - pg 227-228	Mid-topic Checkpoint/Performance Task	1 day
7.EE.A.1 7.EE.A.2	I can use properties of operations to add expressions. I can model addition of expressions in real-life applications.	Volume 1 Topic 4-6: Add Expressions - pg 233-238		2 days

7.EE.A.1 7.EE.A.2	I can use properties of operations to subtract expressions. I can model subtraction of expressions in real-life expressions.	Volume 1 Topic 4-7: Subtract Expressions - pg 239-244		2 days
7.EE.A.2	I can write equivalent expressions to show how quantities are related in real-life applications.	Volume 1 Topic 4-8: Analyze Equivalent Expressions - pg 245-250		2 days
End of Topic 4 Assessments: 7.EE.A 7.EE.B.3-4		End of Topic 4: Generate Equivalent Expressions - pg 251- 255E	Topic 4 Review Topic 4 Assessment/ Performance Task A & B Topics 1thru 4 Cumulative Assessment	2-3 days
3rd Quarter				
Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Timeframe
6.EE.B 6.NS.C 7.EE.A 7.EE.B	I can apply previous mathematical concepts.	Volume 2 Topic 5: Equations and Inequalities - pg. 265F	Topic 5 Readiness Assesment	1 Day
7.EE.B.4	I can analyze word problems to write two-step equations. I can interpret the quantities in an equation.	Volume 2 Topic 5-1: Write Two-Step Equations - pg. 263 – 268		2 Days
7.EE.B.3 7.EE.B.3.a 7.EE.B.3.b 7.EE.B.4.a	I can solve a problem using a two-step equation. I can compare algebraic and arithmetic solutions.	Volume 2 Topic 5-2: Solve Two-Step Equations - pg. 269 - 274 Vocabulary: Isolate the Variable		3 Days
	I can solve equations using the Distributive Property.	Volume 2 Topic 5-3: Solve Equations Using the Distributive Property - pg. 275 – 280		2 Days
Mid-point Topic Assessment: 7.EE.B.3.a 7.EE.B.3.b		Volume 2 Topic 5: Lessons 1-3 - pg. 281-282	Mid-Topic Checkpoint & Performance Task	1 Day
7.EE.B.4.b	I can graph the solution of inequalities on a number line I can solve inequalities using the Addition and Subtraction Properties of Inequality	Volume 2 Topic 5-4: Solve Inequalities Using Addition or Subtraction - pg. 283 – 288		2 Days

7.EE.B.4.b	I can write inequalities and solve them using Multiplication and Division Properties of Inequality. I can graph the solutions of an inequality on a number line.	Volume 2 Topic 5-5: Solve Inequalities Using Multiplication or Division - pg. 289 – 294		2 Days
	I can solve an inequality by multiplying or dividing by a negative rational number. I can write a two-step inequality to solve a problem. I can solve a two-step inequality.	Volume 2 Topic 5-6: Solve Two-Step Inequalities - pg. 299 – 304		3 Days
	I can solve multi-step inequalities. I can use the Distributive Property to simplify and solve multi-step inequalities.	Volume 2 Topic 5-7: Solve Multi-Step Inequalities - pg. 305 – 310		2 Days
	End of Topic 5 Assessments: 7.EE.B	End of Topic 5: Equations and Inequalities - pg. 76-80 - pg. 81A-D	Topic Review Topic 5 Assessment/Performance Task A & B	2 Days
6.SP.A.1 6.SP.B.4 6.SP.B.5	I can apply previous mathematical concepts.	Volume 2 Topic 6: Use Sampling to Draw Inference about Populations - pg. 316F	Topic 6 Readiness Assessment	1 Day
7.SP.A.1	I can explain the difference between a population and a sample. I can establish whether a sample is representative of a population. I can generate random samples that represent the entire population.	Volume 2 Topic 6-1: Populations and Samples - pg. 323 – 330 Vocabulary: Random Sample, Representative Sample		1 Day
7.SP.A.1 7.SP.A.2 7.RP.A.2.c	I can make qualitative and quantitative inferences from a sample data set. I can make estimates about a population based on a sample data set, and assess whether the inferences are valid.	Volume 2 Topic: 6-2 Draw Inferences from Data - pg. 331 – 338 Vocabulary: Valid Inference		1 Day

Mid-point Topic Assessment: 7.SP.A.1 7.SP.A.2 7.RP.A.2.C		Volume 2 Topic 6: Lessons 1-2 pg. 339 – 340	Mid-Topic Checkpoint & Performance Task	1 Day
7.SP.D.8 7.SP.D.8.a 7.SP.D.8.b	I can calculate the MAD and IQR of a data set.	Volume 2 Topic TN-1: Summarize Numerical Data - pg. TN1 – TN8C		2 Days
	I can summarize data sets using measures of variability.	Vocabulary: Absolute Deviation, Mean Absolute Deviation (MAD), Interquartile Range (IQR)		
	I can select the most appropriate measure of center and variability for a data set.	Volume 2 Topic TN-2: Relate Measures of Center and Variability - pg. TN9A – TN16H		2 Days
7.SP.B.3 7.SP.B.4	I can use measures to describe data sets.	Vocabulary: Outlier		
	I can use box plots to compare and make inferences about populations.	Volume 2 Topic 6-3: Make Comparative Inference About Populations - pg. 341 – 346		2 Days
	I can use the median and IQR of datasets to make inferences about two populations.			
7.SP.B.3 7.SP.B.4	I can use the mode, range, mean, and MAD to compare populations.	Volume 2 Topic 6-4: Make More Comparative Inferences About Populations - pg. 347 – 352		2 Days
End of Topic 6 Assessments: 7.SP.A 7.SP.B.3-4 7.SP.D.8		End of Topic 6: Use Sampling to Draw Inference about Populations - pg. 357 – 360 - pg. 361 A-D	Topic Review Topic 6 Assessment/Performance Task	2 Day
6.RP.A.1 6.RP.A.3 6.NS.C.6 6.EE.B.5 7.EE.A.2 7.EE.B.3 7.EE.B.4	I can apply previous mathematical concepts.	Volume 2 Topic 7: Use Sampling to Draw Inference about Populations	Topic 7 Readiness Assessment	1 day
7.EE.B.3.a 7.SP.C.5	I can use probability to describe the likelihood that an event will occur. I can relate probability to mathematical fairness.	Volume 2 Topic 7-1: Understand Likelihood and Probability - pg. 369-374 Vocabulary: Outcomes, Probability		1 Day

7.SP.C.6 7.SP.C.6.a 7.SP.C.6.b 7.SP.C.6.c 7.RP.A.2.c	I can understand theoretical probability and how it can be used.	Volume 2 Topic 7-2: Understand Theoretical Probability - pg. 375 – 380		2 Days
	I can use theoretical probability to predict an outcome.	Vocabulary: Event, Theoretical Probability		
	I can compare theoretical and experimental probability.	Volume 2 Topic 7-3: Understand Experimental Probability - pg. 381- 386		2 Days
	I can use experimental probability to make predictions. I can explain the differences between theoretical and experimental probability.	Vocabulary: Experimental Probability, Relative Frequency		
7.SP.C.6.b 7.SP.C.7 7.SP.C.7.a 7.SP.C.7.b	I can develop a probability model. I can use a probability model to evaluate a situation. I can use a probability model to make an estimate.	Volume 2 Topic 7-4: Use Probability Models - pg. 387 - 392 Vocabulary: Sample Space, Probability Model		2 Days
Mid-point Topic Assessment: 7.SP.C.5 7.SP.C.6 7.SP.C.7		Volume 2 Topic 7: Lessons 1-4 pg. 393 – 394	Mid-Topic Checkpoint & Performance Task	1 Day
End of Topic 7 Assessments: 7.SP.C.5-7		End of Topic 7: Use Sampling to Draw Inference about Populations - pg. 417 – 422 - pg. 423 A-D	Topic Review Topic 7 Assessment/Performance Task (Edit Test as needed)	2 days
4th Quarter				
Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Timeframe
6.G.A.1 6.G.A.2 6.G.A.3 6.G.A.4 7.EE.B.4.b 7.G.B.3	I can apply previous mathematical concepts.	Volume 2 Topic 8: Solve Problems Involving Geometry - pg. 424F	Topic 8 Readiness Assessment	1 Day
7.G.A.1	I can use a scale drawing as a representation of actual lengths and area.	Volume 2 Topic 8-1: Solve Problems Involving Geometry - pg. 431-436 Vocabulary: Scale Drawing		2 Days

7.G.A.2	I can sketch quadrilaterals with given conditions.	Volume 2 Topic 8-2: Draw Geometric Figures - pg. 437-442		1 Day
	I can name and classify quadrilaterals according to their properties.			
7.G.A.2	I can construct triangles with given conditions.	Volume 2 Topic 8-3: Draw Triangles with Given Conditions - pg. 443-450		1 Day
	I can conclude whether or not a triangle is formed and what type of triangle it is.			
7.G.B.4	I can calculate the measure of angles by using angle relationships.	Volume 2 Topic 8-4: Solve Problems Using Angle Relationships - pg. 451- 456 Vocabulary: Adjacent Angles, Complementary Angles, Supplementary Angles, Vertical Angles		3 Days
7.G.B.3 7.EE.B.3 7.EE.B.4.a	I can calculate the circumference, radius, or diameter of a circle. I can recognize the relationship between the circumference and the diameter of a circle and π .	Volume 2 Topic 8-5: Solve Problems Involving Circumference of a Circle - pg. 456-462 Vocabulary: Circumference		2 Days
Mid-point Topic Assessment: 7.G.A.1-2 7.G.B.3-4		Volume 2 Topic 8: Lessons 1-5 - pg. 463 – 464	Mid-Topic Checkpoint & Performance Task	1 Day
7.G.B.3 7.EE.B.3 7.EE.B.4.a	I can find the area of a circle. I can use the area to find the radius and diameter. I can solve problems involving the area of a circle.	Volume 2 Topic 8-6: Solve Problems Involving Area of a Circle - pg. 465-470		2 Days
7.G.B.5 7.NS.a.3 7.EE.B.3 7.EE.B.4.a	I can find the surface area of two-dimensional composite shapes.	Volume 2 Topic 8-8: Solve Problems Involving Surface Area - pg. 481 - 486		2 Days
	I can find the surface area of three-dimensional composite shapes.	Vocabulary: Composite Figure		
	I can calculate the volume of various three-dimensional composite figures. I can solve problems involving the volume of three-dimensional figures.	Volume 2 Topic 8-9: Solve Problems Involving Volume - pg. 487 - 492		2 Days

End of Topic 8 Assessments: 7.G.A 7.G.B		End of Topic 8: Solve Problems Involving Geometry - pg. 493 – 498 - pg. 499 A-D	Topic Review Topic 8 Assessment/Performance Task (Edit Test as Needed)	2 Days
<p style="text-align: center;">TN READY REVIEW: ALL MAJOR WORK FOR 7TH GRADE</p>			See SAVVAS TN Standards Practice Teacher's guide <ul style="list-style-type: none"> Standards Practice sheets Assessment Readiness Practice Tests 	15 days
8TH grade prep: 8.NS.A.1 8.NS.A.2	I can locate repeating decimals on a number line. I can write repeating decimals as fractions. I can classify a number as rational or irrational. I can understand the concepts of square roots and perfect square roots. I can approximate square roots by using perfect squares. I can compare and order rational and irrational numbers.	Online resource: 8 th grade Volume 1 Topics 1 thru 4: Real Numbers - pgs 9-32		14 days