

# Connecticut Mathematics Model Curriculum Alignment

Resource Name: HMH Into Math Grade 7

## Alignment Grade 7

Model Unit Name	Model Unit Standards	Resource Unit(s) Number	Resources Lessons	Pacing
<i>This is the title of the unit in the model curricula</i>	<i>These are the standards addressed in the unit</i>	<i>This is the unit(s) that aligns with the model unit from the resource</i>	<i>These are the lessons from the identified units that align to the standards within the model unit</i>	<i>This is the expected number of days for instruction</i>
Operating with Rational Numbers (Addition & Subtraction)	7.NS.A.1 7.NS.A.3	Modules 3 & 4 Modules 4, 5 & 6	3.1, 3.2, 3.3, 4.1, 4.2, 4.3, 4.4 4.3, 5.2, 5.3, 5.4, 6.1, 6.2, 6.3	2 Weeks 4 Days 2 Weeks
Operating with Rational Numbers (Multiplication & Division)	7.NS.A.2 7.NS.A.3 7.EE.A.2 7.EE.B.3	Modules 5 & 6 Module 4, 5 & 6 Modules 2 & 7 Modules 5, 6, 7, 10, 11, 14 & 15	5.1, 5.2, 5.3, 5.4, 6.1 4.3, 5.2, 5.3, 5.4, 6.1, 6.2, 6.3 2.2, 7.1, 7.2 5.4, 6.1, 6.2, 6.3, 7.4, 10.1, 10.2, 10.3, 10.4, 11.2, 11.3, 11.4, 14.4, 15.3	1 Week 3 Days 2 Weeks 2 Days 1 Week 4 Weeks 1 Day
Two- and Three-Dimensional Geometry	7.G.A.2 7.G.A.3 7.G.B.4 7.G.B.5 7.G.B.6	Module 9 Modules 10 & 11 Module 10 Module 7 Modules 10 & 11	9.1, 9.2, 9.3, 9.4 10.3, 11.1 10.1, 10.2 7.5 10.4, 11.2, 11.3, 11.4	1 Week 2 Days 3 Days 3 Days 2 Days 1 Week

Proportional Reasoning	7.RP.A.1 7.RP.A.2 7.RP.A.3	Module 1 Module 1 Modules 1, 2, 6, 14 & 15	1.3, 1.6 1.1, 1.2, 1.4, 1.5 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 6.3, 14.2, 14.3, 14.4, 15.1, 15.2, 15.3, 15.4	4 Days 1 Week 3 Days 6 Weeks
	7.G.A.1	Module 1	1.6	2 Days
Algebraic Reasoning II	7.EE.A.1 7.EE.A.2 7.EE.B.4	Module 7 Modules 2 & 7 Modules 7 & 8	7.2 2.2, 7.1, 7.2 7.3, 7.4, 7.5, 8.1, 8.2, 8.3	2 Days 1 Week 2 Weeks 1 Day
Probability	7.SP.C.5 7.SP.C.6 7.SP.C.7 7.SP.C.8	Module 14 Modules 14 & 15 Modules 14 & 15 Modules 14 & 15	14.1 14.2, 14.4, 15.1, 15.3 14.2, 15.1, 15.3 14.3, 15.2, 15.4	1 Day 1 Week 3 Days 1 Week 1 Day 1 Week 1 Day
Inferences and Populations	7.SP.A.1 7.SP.A.2 7.SP.B.3 7.SP.B.4	Module 12 Module 12 Module 13 Module 13	12.1 12.2, 12.3 13.1, 13.2, 13.3 13.1, 13.2, 13.3	1 Day 3 Days 1 Week 1 Day 1 Week 1 Day

### Scope and Sequence

*If a district uses this resource to implement the state model curriculum for grade 7, the following scope and sequence should be followed to ensure alignment and attention to the progressions of mathematics.*

Order	Unit Number/Title and Lessons	Lesson Objectives	Number of Days (Assume 1 Hour of Instruction)	Number of Weeks
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1	Lesson 1.1 Explore Relationships	Use patterns and unit rates to analyze and describe relationships.	1	
2	Lesson 1.2 Recognize Proportional Relationships in Tables	Determine if a relationship represented in table is proportional, identify the constant of proportionality, and write an equation in the form of $y = kx$ .	2	
3	Lesson 1.3 Compute Unit Rates Involving Fractions	Use unit rates involving fractions to solve real-world problems.	2	
4	Lesson 1.4 Recognize Proportional Relationships in Graphs	Students will identify the characteristics of a proportional relationship when graphed.	2	
5	Lesson 1.5 Use Proportional Relationships to Solve Rate Problems	Use a proportional relationship to solve multi-step problems.	2	
6	Lesson 1.6 Practice Proportional Reasoning with Scale Drawings	Use scale drawings to solve problems.	2	Module 1 2 Weeks 1 Day

7	Lesson 2.1 Percent Change	Use proportional reasoning to calculate percent increase or decrease.	2	
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8	Lesson 2.2 Markups and Discounts	Calculate markups, markdowns, retail prices, and discount price, and represent them using equations of the form $y = kx$ .	2	
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9	Lesson 2.3 Taxes and Gratuities	Represent taxes, gratuities, and total cost using equations in the form of $y = kx$ by applying proportional reasoning. Use the equations to solve problems and assess reasonableness of their answers.	2	
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10	Lesson 2.4 Commissions and Fees	Use proportional reasoning to find total earnings for someone earning a base salary plus a commission. Use proportional reasoning to find fees (including fees as percent and as a constant) and assess the reasonableness of their answers.	2	
11	Lesson 2.5 Simple Interest	Use proportional reasoning to calculate simple interest, the total value of an account earning simple interest, and assess the reasonableness	2	Module 2 2 Weeks

		of their answers.		
12	Lesson 3.1 Add or Subtract a Positive Integer on a Number Line	Use a number line to add and subtract positive integers.	2	
13	Lesson 3.2 Add or Subtract a Negative Integer on a Number Line	Use a number line to add or subtract a negative integer and then assess their results for reasonableness.	2	

14	Lesson 3.3 Use a Number Line to Add and Subtract Rational Numbers	Use a number line to add and subtract rational numbers.	2	Module 3 1 Week 1 Day
15	Lesson 4.1 Compute Sums of Integers	Calculate the sum of two integers.	2	
16	Lesson 4.2 Compute Differences of Integers	Calculate the difference of two integers without using a number line.	2	
17	Lesson 4.3 Compute Sums and Differences of Rational Numbers	Fluently add and subtract rational numbers without a number line.	2	
18	Lesson 4.4 Apply Properties to Multi-step Addition and Subtraction Problems	Use properties to solve multi-step problems involving sums and differences of positive and negative	2	Module 4 1 Week 3 Days

		rational numbers.		
19	Lesson 5.1 Understand Multiplication and Division of Rational Numbers	Develop rules to find the product or quotient of two integers.	2	

20	Lesson 5.2 Multiply Rational Numbers	Find the product of three or more signed rational numbers.	1	
21	Lesson 5.3 Write Fractions as Decimals and Divide Integers	Express quotients in different forms.	2	
22	Lesson 5.4 Multiply and Divide Rational Numbers in Context	Use products and quotients of rational numbers to solve problems.	1	Module 5 1 Week 1 Day
23	Lesson 6.1 Apply Properties and Strategies to Operate with Rational Numbers	Apply properties and strategies to operate with rational numbers.	1	
24	Lesson 6.2 Estimate to Check Reasonableness	Use estimation to check the reasonableness of answers when solving multi-step real-world problems.	1	
25	Lesson 6.3 Solve Multi-step Problems with Rational	Solve multi-step problems involving a combination of rational	2	Module 6 4 Days

	Numbers in Context	number operations.		
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26	Lesson 7.1 Write Linear Expressions in Different Forms for Situations	Use linear expressions to represent a quantity in different ways.	1	
27	Lesson 7.2 Add, Subtract, and Factor Linear Expressions with Rational Coefficients	Add, subtract, factor, and expand linear expressions with rational coefficients.	2	
28	Lesson 7.3 Write Two-Step Equations for Situations	Represent a real-world situation with an equation.	1	
29	Lesson 7.4 Apply Two-Step Equations to Solve Real-World Problems	Solve real-world situations using an equation.	2	
30	Lesson 7.5 Apply Two-Step Equations to Find Angle Measures	Write and solve two-step equations involving unknown angle measurements.	2	Module 7 1 Week 3 Days
31	Lesson 8.1 Understand and Apply Properties to Solve One-Step Inequalities	Apply properties to solve one-step inequalities.	2	



32	Lesson 8.2 Write Two-Step Inequalities for Situations	Write two-step inequalities to represent situations.	2	
33	Lesson 8.3 Apply Two-Step Inequalities to Solve Problems	Write and solve two-step inequalities to solve problems.	2	Module 8 1 Week 1 Day
34	Lesson 9.1 Draw Circles and Other Figures	Draw and construct circles and other figures using technology and freehand with given conditions.	2	
35	Lesson 9.2 Draw and Construct Triangles Give Side Lengths	Determine how many triangles or quadrilaterals can be made given the side lengths: none, one, or many.	2	
36	Lesson 9.3 Draw and Construct Triangles Given Angle Measures	Determine how many triangles can be made given the angle measures: none, one, or many.	2	

37	Lesson 9.4 Draw and Analyze Shapes to Solve Problems	Draw, construct, and analyze two-dimensional figures, to solve real- world problems.	1	Module 9 1 Week 2 Days
38	Lesson 10.1 Derive and Apply Formulas for Circumference	Derive and apply formulas for circumference.	1	

39	Lesson 10.2 Derive and Apply a Formula for the Area of a Circle	Derive and apply formulas for the area of a circle.	2	
40	Lesson 10.3 Describe and Analyze Cross Sections of Circular Solids	Describe and analyze cross sections of circular solids that result in circles, rectangles, and triangles	2	
41	Lesson 10.4 Areas of Composite Figures	Use known formulas to calculate the areas of composite figures.	1	Module 10 1 Week 1 Day
42	Lesson 11.1 Describe and Analyze Cross Sections of Prisms and Pyramids	Identify and describe the two-dimensional figures resulting from horizontal and vertical cross sections of pyramids and prisms.	1	

43	Lesson 11.2 Derive and Apply Formulas for Surface Areas of Cubes and Right Prisms	Learn to calculate the surface area of a right prism using the surface area formula.	1	
44	Lesson 11.3 Derive and Apply a Formula for the Volume of a Right Prism	Calculate the volume of a right prism using the volume formula.	1	
45	Lesson 11.4 Solve Multi-step Problems with Surface Area	Solve multi-step problems involving three-dimensional figures using formulas for	2	Module 11 1 Week

	and Volume	surface area and volume.		
46	Lesson 12.1 Understand Representative Samples	Understand populations, random samples, and how to select a representative sample.	1	
47	Lesson 12.2 Make Inferences from a Random Sample	Use a random sample to make inferences about a population.	2	

48	Lesson 12.3 Make Inferences from Repeated Random Samples	Understand that repeatedly sampling a population with the same size random sample will cause the data to vary.	1	Module 12 4 Days
49	Lesson 13.1 Compare Center and Spread of Data Displayed in Dot Plots	Compare the center and spread of data displayed in dot plots.	1	
50	Lesson 13.2 Compare Center and Spread of Data Displayed in Box Plots	Compare data displayed in box plots and use these comparisons to draw inferences about two populations.	1	
51	Lesson 13.3 Compare Means Using Mean Absolute Deviation and Repeated Sampling	Use means and MADs to compare two populations.	2	Module 13 4 Days

52	Lesson 14.1 Understand Probability of an Event	Describe the likelihood of an event in terms of a probability between 0 and 1.	1	
53	Lesson 14.2 Find Experimental Probability of Simple Events	Find the experimental probability of an event.	2	

54	Lesson 14.3 Find Experimental Probability of Compound Events	Determine the probability of compound events.	2	
55	Lesson 14.4 Use Experimental Probability and Proportional Reasoning to Make Predictions	Use experimental probability and proportional reasoning to make predictions about real-world scenarios.	2	Module 14 1 Week 2 Days
56	Lesson 15.1 Find Theoretical Probability of Simple Events	Find the theoretical probability of simple events and compare theoretical probability to experimental probability.	2	
57	Lesson 15.2 Find Theoretical Probability of Compound Events	Find and compare theoretical probabilities of compound events using a table, a tree diagram, and an organized list.	2	
58	Lesson 15.3 Use Theoretical Probability and Proportional Reasoning to Make Predictions	Use theoretical probability and proportional reasoning to make a prediction about a simple or compound event and make a qualitative prediction.	2	

59	Lesson 15.4 Conduct Simulations	Design and perform a simulation to test the probability of a simple event or a compound event.	2	Module 15 1 Week 3 Days
<b>Supports of Diversity, Equity, and Inclusion</b>				
<i>Please provide any information relative to supporting culturally responsive instruction, multi-language learners, and students with disabilities</i>				

Into Math is a comprehensive instructional program that is specifically designed to support the diverse needs of all students, including those who are culturally and linguistically diverse, as well as those with disabilities. The program is built on a foundation of research-based instructional strategies and provides a wealth of resources for teachers to support the learning of all students.

One of the key features of the program is the inclusion of learning mindset prompts, which encourage students to develop a growth mindset and believe in their ability to succeed in math. These prompts are integrated throughout the program and provide students with the tools they need to persevere through challenges and become confident and successful learners.

In addition to the learning mindset prompts, the program also includes guiding questions and supports for teachers to identify students who may require additional assistance. This allows teachers to provide targeted support and interventions to those students who need it most. The program also provides detailed information on students' prior learning, current development, and future connections to be made, which enables teachers to differentiate instruction effectively.

The program places a strong emphasis on language development and provides teachers with a variety of resources, such as Three Reads, which support sense making, and suggestions for connecting language to various concepts, as well as key academic vocabulary for each module. These resources are designed to help teachers support the language development of multilingual learners and ensure that they have the language skills they need to access the math curriculum.

Additionally, the program is designed to be culturally responsive and inclusive to all students. It provides teachers with resources and strategies to address cultural and linguistic diversity, and strategies for building positive relationships with students. This approach to instruction acknowledges and values the cultures, languages, and backgrounds of all students and helps to create an inclusive and equitable learning environment.

Furthermore, the program offers a range of interventions, additional practice, and math center options to support students with differing learning needs. These interventions are designed to provide students with additional support and practice in areas where they may be struggling, and the math center options provide students with hands-on, interactive activities that help to make math more engaging and accessible.

Overall, Into Math is a highly effective instructional program that is well-equipped to support the diverse needs of all students. The program's comprehensive approach, which includes a focus on learning mindset, language development, and interventions for students with special

needs, ensures that all students have the support they need to succeed in math. Furthermore, the program is designed to be flexible, allowing teachers to differentiate instruction to meet the unique needs of their students, and provide targeted support to students who may be



struggling.