



# Math Teachers Press, Inc.

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## Correlation of *Moving with Math® Middle High* To Massachusetts Mathematics Curriculum Framework Grades 7-8

	MH1 <i>Number Sense, Reasoning &amp; Data</i> Student Book Skill Builders (SB)	MH2 <i>Fractions &amp; Decimals</i> Student Book Skill Builders (SB)	MH3 <i>Percent &amp; Probability</i> Student Book Skill Builders (SB)	MH4 <i>Geometry &amp; Measurement</i> Student Book Skill Builders (SB)	MH5 <i>Algebra</i> Student Book Skill Builders (SB)
<b>NUMBER SENSE AND OPERATIONS</b>					
<b>8.N.1</b> Compare, order, estimate, and translate among integers, fractions and mixed numbers (i.e., rational numbers), decimals and percent.	3-5 SB: 4-4, 43-8, 54-2	2-5, 8-12, 43, 44, 46-50, 52-54 SB: 20-3, 21-1	8-21, 23, 28-31 SB: 4-1, 18-1, 19-1, 20-1, 25-1 to 25-5	SB: 5-1, 11-1, 18-1, 19-1, 20-2, 25-1, 25-2, 27-1	5 SB: 5-1, 11-1, 18-1, 19-1, 20-1, 25-1, 48-2
<b>8.N.2</b> Define, compare, order, and apply frequently used irrational numbers.	SB: 1-3	55 SB: 65-1	SB: 65-1		SB: 58-5
<b>8.N.3</b> Use ratios and proportions in the solution of problems, in particular, problems involving unit rates, scale factors, and rate of change.		37, 38, 67-69 SB: 46-1, 46-2	22, 24-27, 49 SB: 26-1	26-28, 31, 32, 58, 59 SB: 26-1, 26-2, 46-1, 46-3	SB: 46-1

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<b>8.N.4</b> Represent numbers in scientific notation, and use them in calculations and problem situations.	29, 30 SB: 57-1, 57-2	SB: 57-1	SB: 57-1		SB: 57-1
<b>8.N.5</b> Apply number theory concepts, including prime factorization and relatively prime numbers to the solution of problems.	14-16, 19-21, 39 SB: 3-1 to 3-3	7, 51 SB: 3-1, 12-1, 12-2, 24-1	SB: 2-1, 3-1	SB: 1-1, 3-1, 4-1, 20-1	2-4, 6-8, 26, 27 SB: 1-1, 3-1, 4-1, 48-1, 58-6
<b>8.N.6</b> Demonstrate an understanding of absolute value.					9, 10 SB: 48-4, 50-6
<b>8.N.7</b> Apply the rules of powers and roots to the solution of problems. Extend the Order of Operations to include positive integer exponents and square roots.	22-28 SB: 6-1, 6-2, 54-1, 59-1, 59-2, 69-1	SB: 6-1	SB: 6-1	33 SB: 6-1, 54-1	51, 52, 70-76 SB: 6-1, 54-1, 59-6, 61-1, 61-2, 61-4

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<b>8.N.8</b>	Demonstrate an understanding of the properties of arithmetic operations on rational numbers. Use the associative, commutative, and distributive properties; properties of the identity and inverse elements; and the notion of closure of a subset of the ratio	11-13 SB: 2-1 to 2-3	SB: 2-1, 17-3	SB: 2-1	SB: 2-1	70 SB: 2-1
<b>8.N.9</b>	Use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems, e.g. multiplying by $1/2$ or $0.5$ is the same as dividing by 2.	25, 26, 28, 29 SB: 6-1, 6-2	SB: 3-1, 6-1	SB: 6-1		6-8, 13-20 SB: 58-1, 58-2
<b>8.N.10</b>	Estimate and compute with fractions (including simplification of fractions), integers, decimals, and percents (including those greater than 100 and less than 1).	36-38, 40, 42-45 SB: 5-1, 5-2	14-21, 24-32, 34, 56, 59-66, 70-72, 74 SB: 22-1, 22-2, 23-1 to 23-3, 44-1	2-7, 28-30, 33-47, 50-54 SB: 27-1 to 27-5, 28-1 to 28-7, 43-3, 43-4, 44-1 to 44-3, 51-1 to 51-3	SB: 17-1, 27-2, 28-1, 51-1	13-24, 28-31 SB: 7-1, 8-1, 9-1, 10-1, 12-1, 13-1, 14-1, 15-1, 16-1, 17-1, 21-1, 22-1, 23-1, 24-1, 26-1, 27-1, 28-1, 48-

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<b>8.N.1.1</b>	Determine when an estimate rather than an exact answer is appropriate and apply in problem situations.	47, 48, 54 SB: 43-11, 43-13	23, 71, 72, 74	32		
<b>8.N.1.2</b>	Select and use appropriate operations – addition, subtraction, multiplication, division, and positive integer exponents – to solve problems with rational numbers including negatives).	41 SB: 43-13	22, 35, 36, 54, 57, 58, 73 SB: 7-1, 8-1, 9-1, 10-1, 43-1, 43-2	27 SB: 1-1	SB: 7-1 to 7-3, 10-1, 12-1, 13-1, 14-1, 15-1, 16-1, 21-1, 22-1, 23-1, 24-1, 26-3, 43-1, 43-2, 44-1	25, 55 SB: 7-1, 8-1, 9-1, 10-1, 12-1, 13-1, 14-1, 15-1, 16-1, 17-1, 21-1, 22-1, 23-1, 24-1, 26-1, 27-1, 43-1, 44-1, 48, 2
	<b>PATTERNS, RELATIONS AND ALGEBRA</b>					
<b>8.P.1</b>	Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and when possible, symbolic expressions. Include arithmetic and geometric progressions, e.g., compounding.	31-34, 39, 46-54 SB: 42-1 to 42-5	6, 8, 13, 25 SB 42-1, 43-2	48 SB: 5-1, 42-1, 43-1 to 43-3	SB: 26-2	SB: 42-1, 50-1, 50-2, 58-4, 61-3
<b>8.P.2</b>	Evaluate simple algebraic expressions for given variable values.	SB: 43-5 to 43-7, 43-13	33	48		SB: 50-1 to 50-4, 59-2 to 59-4

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<b>8.P.3</b>	Demonstrate an understanding of the identity $(-x)(-y) = xy$ . Use this identity to simplify algebraic expressions.					21 SB: 58-3
<b>8.P.4</b>	Create and use symbolic expressions and relate them to verbal, tabular, and graphical representations.	17, 18 SB: 43-4 to 43-7, 43-13, 59-3, 59-4	33	48		32-50, 55-60 SB: 50-1, 50-2, 59-5
<b>8.P.5</b>	Identify the slope of a line as a measure of its steepness and as a constant rate of change from its table of values, equation, or graph. Apply the concept of slope to the solution of problems.					77
<b>8.P.6</b>	Identify the roles of variables within an equation, e.g., $y = mx + b$ , expressing $y$ as a function of $x$ with parameters $m$ and $b$ .	18 SB: 43-5 to 43-7, 43-13				41-50

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<b>8.P.7</b> Set up and solve linear equations and inequalities with one or two variables, using algebraic methods, models, and/or graphs.	SB: 43-5 to 43-7, 43-13				41-50, 53-59
<b>8.P.8</b> Explain and analyze – both quantitatively and qualitatively, using pictures, graphs, charts, or equations — how a change in one variable results in a change in another variable in functional relationships.	35, 61-68 SB: 42-3, 60-1	25, 77			61-69 SB: 60-1, 60-3, 60-5
<b>8.P.9</b> Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.	SB: 43-14	38	49	SB: 46-1	43, 44, 46, 49, 50, 67 SB: 60-3
<b>8.P.10</b> Use tables and graphs to represent and compare linear growth patterns. In particular, compare rates of change and x- and y-intercepts of different linear patterns.	61-68, 70 SB: 67-4, 68-1			SB: 42-1	61-63, 68, 69
<b>GEOMETRY</b>					

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<b>8.G.1</b> Analyze, apply, and explain the relationship between the number of sides and the sums of the interior and exterior angle measures of polygons.				20-25 SB: 29-1, 29-2, 31-1 to 31-3, 52-1	SB: 31-1, 32-1, 33-1, 52-1, 53-1
<b>8.G.2</b> classify figures in terms of congruence and similarity, and apply these relationships to the solution of problems.				2-4, 6-10, 12-14, 17, 29, 30 SB: 32-2 to 32-4, 46-2	
<b>8.G.3</b> Collect, sort, organize, and draw conclusions about data using concrete objects, pictures, numbers, and graphs.	61, 63-68, 70, 74-76 SB: 43-12, 67-1, 67-3, 67-4, 68-1 to 68-6		SB: 47-6, 68-3		
<b>8.G.4</b> Demonstrate an understanding of the Pythagorean theorem. Apply the theorem to the solution of problems.				34, 35 SB: 54-2, 54-3	
<b>8.G.5</b> Use a straightedge, compass, or other tools to formulate and test conjectures, and to draw geometric figures.					

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<b>8.G.6</b>	Predict the results of transformations on unmarked or coordinate planes and draw the transformed figure, e.g., predict how tessellations transform under translations, reflections, and rotations.				14 SB: 49-1, 53-3	
<b>8.G.7</b>	Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces.				36-38 SB: 29-3, 41-1, 62-1	SB: 41-1
<b>8.G.8</b>	Recognize and draw two-dimensional representations of three-dimensional objects, e.g., nets, projections, and perspective drawings.				36-38 SB: 41-1, 62-1	SB: 41-1
<b>8.M.1</b>	<b>MEASUREMENT</b> Select, convert (within the same system of measurement), and use appropriate units of measurement or scale.			57	5, 43-48, 53-57 SB: 32-5, 34-1 to 34-3, 35-1, 36-1, 52-2, 52-3, 53-2	SB: 34-1, 35-1, 36-1



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<b>8.M.2</b>	Given the formulas, convert from one system of measurement to another. Use technology as appropriate.				43-48, 53-57 SB: 37-1, 37-2	SB: 37-1
<b>8.M.3</b>	Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter/circumference of parallelograms, trapezoids, and circles, Given the formulas, determine the surface area and vol	SB: 54-2		SB: 6-1	38, 39, 49-52, 60-76 SB: 29-2, 36-2, 36-3, 38-1, 39-1, 40-1, 40-2, 41-2, 55-1, 55-2, 56-1, 62-2, 63-1	SB: 29-1, 38-1, 39-1, 40-1, 41-1, 55-1, 56-1
<b>8.M.4</b>	Use ratio and proportion (including scale factors) in the solution of problems, including problems involving similar plane figures and indirect measurement.		38 SB: 46-2	SB: 46-1	29, 31, 32	SB: 46-1
<b>8.M.5</b>	Use models, graphs, and formulas to solve simple problems involving rates, e.g., velocity and density.				58, 59	SB: 60-2

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	<b>DATA ANALYSIS, STATISTICS, AND PROBABILITY</b>					
<b>8.D.1</b>	Describe the characteristics and limitations of a data sample. Identify different ways of selecting a sample, e.g., convenience sampling, responses to a survey, random sampling.	77 SB: 68-7				
<b>8.D.2</b>	Select, relate, interpret, and utilize various tabular and graphical representations of data, e.g., circle graphs, Venn diagrams, scatter plots, stem-and-leaf plots, box-and-whisker plots, histograms, tables, and charts. Differentiate between continuous	61-68, 71-76 SB: 45-5, 45-6, 67-1, 67-3, 67-4, 68-1 to 68-6, 70-1	25	55, 56, 58, 59 SB: 68-1 to 68-4		

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<p><b>8.D.3</b> Find, describe, and interpret appropriate measures of central tendency (mean, median, and mode) and spread (range) that represent a set of data. Use these notions to compare different sets of data.</p>	<p>55-60 <b>SB:</b> 45-1 to 45-4, 67-2</p>	<p>75, 76 <b>SB:</b> 45-1</p>	<p><b>SB:</b> 45-1</p>	<p><b>SB:</b> 45-1</p>	<p><b>SB:</b> 45-1</p>	<p><b>SB:</b> 45-1</p>
<p><b>8.D.4</b> Use tree diagrams, tables, organized lists, basic combinatorics ("fundamental counting principle"), and area models to compute probabilities for simple compound events, e.g., multiple coin tosses or rolls of dice.</p>		<p>78 <b>SB:</b> 47-1</p>	<p>61-77 <b>SB:</b> 47-1 to 47-5, 66-1, 66-2</p>	<p><b>SB:</b> 47-1</p>	<p><b>SB:</b> 47-1</p>	<p><b>SB:</b> 47-1</p>