



# Math Teachers Press, Inc.

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## MASSACHUSETTS MATHEMATICS CURRICULUM FRAMEWORK CORRELATED TO MOVING WITH MATH® INTERMEDIATE/MIDDLE (IM) GRADE 5

		IM1 <i>Number, Reasoning &amp; Data</i> Student Book Skill Builders (SB)	IM2 <i>Fractions, Decimals &amp; Percent</i> Student Book Skill Builders (SB)	IM3 <i>Geometry, Measurement, Graphing</i> Student Book Skill Builders (SB)
	<b>NUMBER SENSE AND OPERATION STRAND</b>			
<b>5.N.1</b>	Demonstrate an understanding of (positive integer) powers of ten, e.g., $10^2$ , $10^5$ .	<b>SB:</b> 4-4	<b>SB:</b> 4-1	
<b>5.N.2</b>	Demonstrate an understanding of place value through millions and thousandths.	4 <b>SB:</b> 1-2, 1-3	45 <b>SB:</b> 1-1, 23-1	
<b>5.N.3</b>	Represent and compare large (millions) and small (thousandths) positive numbers in various forms, such as expanded notation without exponents, e.g., $9724 = 9 \times 1000 + 7 \times 100 + 2 \times 10 + 4$ .	3, 7, 8 <b>SB:</b> 1-5, 2-3, 2-4	42, 45, 49 <b>SB:</b> 23-1	
<b>5.N.4</b>	Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line. <i>This standard is intentionally the same as standard 6.N.4.</i>		2-5 <b>SB:</b> 11-1 to 11-4, 11-6	
<b>5.N.5</b>	Identify and determine common equivalent fractions (with denominators 2, 4, 5, 10) and mixed numbers (with denominators 2, 4, 5, 10), decimals, and percents (through one hundred percent), e.g., $\frac{3}{4} = 0.75 = 75\%$ .		6, 13, 47, 67, 68, 69 <b>SB:</b> 12-1, 12-3, 12-4, 12-6, 14-1, 25-1, 30-1, 30-3, 30-5	
<b>5.N.6</b>	Find and position whole numbers, positive fractions, positive mixed numbers, and positive decimals on a number line.		5, 43 <b>SB:</b> 23-2	<b>SB:</b> 11-1, 14-1, 21-1

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<b>5.N.7</b>	Compare and order whole numbers, positive fractions, positive mixed numbers, positive decimals, and percents.	7, 8, 66	10, 11, 49, 51 <b>SB:</b> 13-1, 13-2, 13-5, 24-1, 24-2	
<b>5.N.8</b>	Apply the number theory concepts of common factor, common multiple, and divisibility rules for 2, 3, 5 and 10 to the solution of problems. Demonstrate an understanding of the concepts of prime and composite numbers.	13-15 <b>SB:</b> 4-2, 4-3, 4-6	8, 18 <b>SB:</b> 4-2, 12-2, 13-4	
<b>5.N.9</b>	Solve problems involving multiplication and division of whole numbers, and multiplication of positive fractions with whole numbers.	31-47 <b>SB:</b> 8-2 to 8-7, 9-1 to 9-5, 10-1 to 10-7	30 <b>SB:</b> 19-2 to 19-5	
<b>5.N.10</b>	Demonstrate an understanding of how parentheses affect expressions involving addition, subtraction, and multiplication, and use that understanding to solve problems, e.g., $3 \times (4 + 2)$ $3 \times 6$ .	22, 55 <b>SB:</b> 5-4, 5-7	<b>SB:</b> 5-2, 45-6	
<b>5.N.11</b>	Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems. <i>This standard is intentionally the same as standard 6.N.12.</i>	26 <b>SB:</b> 7-2		
<b>5.N.12</b>	Accurately and efficiently add and subtract whole numbers and positive decimals. Multiply and divide (using double-digit divisors) whole numbers. Multiply positive decimals with whole numbers.	23-26, 32-48 <b>SB:</b> 6-1 to 6-3, 7-1 to 7-4, 8-1 to 8-7, 9-1 to 9-5, 10-1 to 10-3, 10-6, 10-7	54, 57 <b>SB:</b> 26-2, 26-3, 27-2	

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<b>5.N.1</b> <b>3</b>	Accurately and efficiently add and subtract positive fractions and mixed numbers with like denominators and with unlike denominators (2, 4, 5, 10 only); multiply positive fractions with whole numbers. Simplify fractions in cases when both the numerator and the denominator have 2, 3, 4, 5, or 10 as a common factor.		6, 8, 14-17, 19-23, 30, 31 <b>SB:</b> 15-1 to 15-3, 16-1 to 16-4, 17-1 to 17-4, 18-1, 18-2, 19-2 to 19-4	
<b>5.N.1</b> <b>4</b>	Estimate sums and differences of whole numbers, positive fractions, and positive decimals. Estimate products of whole numbers and products of positive decimals with whole numbers. Use a variety of strategies and judge the reasonableness of the answer.	27, 28, 48, 49, 51 <b>SB:</b> 49-1, 49-2, 50-1	25, 56, 65 <b>SB:</b> 18-3, 18-4, 45-3, 45-5, 49-1, 50-1	
	<b>PATTERNS, RELATIONS, AND ALGEBRA STRANDS</b>			
<b>5.P.1</b>	Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABCC; 1, 5, 9, 13...; 3, 9, 27... <i>This standard is intentionally the same as standard 6P.1.</i>	74, 75 <b>SB:</b> 44-1 to 44-3, 44-6	<b>SB:</b> 44-1	21, 22 <b>SB:</b> 44-1
<b>5.P.2</b>	Replace variables with given values and evaluate/simplify.			
<b>5.P.3</b>	Use the properties of equality to solve problems with whole numbers.	71, 72 <b>SB:</b> 56-2, 56-3		
<b>5.P.4</b>	Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols e.g., input-output tables. <i>This standard is intentionally the same as standard 6.P.4.</i>	73, 76, 78 <b>SB:</b> 44-4, 44-5		74 <b>SB:</b> 44-5

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<b>5.P.5</b>	Solve problems involving proportional relationships using concrete models, tables, graphs, and paper-pencil methods.		<b>SB:</b> 12-8	57, 58 <b>SB:</b> 12-1, 52-2
<b>5.P.6</b>	Interpret graphs that represent the relationship between two variables in everyday situations.	78		74
<b>GEOMETRY STRAND</b>				
<b>5.G.1</b>	Identify, describe, and compare special types of triangles (isosceles, equilateral, right) and quadrilaterals (square, rectangle, parallelogram, rhombus, trapezoid), e.g., recognize that all equilateral triangles are isosceles, but not all isosceles triangles are equilateral.			7, 8, 9 <b>SB:</b> 34-3 to 34-5
<b>5.G.2</b>	Identify, describe, and compare special types of three-dimensional shapes (cubes, prisms, spheres, pyramids) based on their properties, such as edges and faces.			11, 12 <b>SB:</b> 34-6
<b>5.G.3</b>	Identify relationships among points and lines, e.g., intersecting, parallel, perpendicular.			3, 4 <b>SB:</b> 32-1 to 32-5
<b>5.G.4</b>	Using ordered pairs of whole numbers (including zero), graph, locate, and identify points, and describe paths on the Cartesian coordinate plane.	77 <b>SB:</b> 43-1		15, 16 <b>SB:</b> 43-1
<b>5.G.5</b>	Describe and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.			20 <b>SB:</b> 60-4
<b>5.G.6</b>	Identify and describe line symmetry in two-dimensional shapes, including shapes that have multiple lines of symmetry.			17 <b>SB:</b> 60-1

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<b>5.G.7</b>	Determine if two triangles or two quadrilaterals are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.			19
<b>MEASUREMENT STRAND</b>				
<b>5.M.1</b>	Apply the concepts of perimeter and area to the solution of problems involving triangles and rectangles. Apply formulas where appropriate.			40-47 <b>SB:</b> 38-1 to 38-4, 38-6 to 38-8, 38-11
<b>5.M.2</b>	Identify, measure, describe, classify, and draw various angles. Draw triangles given two sides and the angle between them or given two angles and the side between them, e.g., draw a triangle with one right angle and two sides congruent.			5, 6, 23, 24 <b>SB:</b> 31-2, 33-1, 37-1 to 37-3, 60-3
<b>5.M.3</b>	Solve problems involving simple unit conversions within a system of measurement.			31, 33-37 <b>SB:</b> 36-4, 36-6, 41-1, 41-2, 42-1, 42-2, 45-1, 45-2
<b>5.M.4</b>	Find volumes and surface area of rectangular prisms. <i>This standard is intentionally the same as standard 6.M.6.</i>			52-54 <b>SB:</b> 39-2 to 39-5
<b>5.M.5</b>	Find the sum of the measures of the interior angles in triangles by measuring the angles, and without measuring the angles.			25, 26 <b>SB:</b> 55-1, 55-3
<b>DATA ANALYSIS, STATISTICS, AND PROBABILITY STRAND</b>				
<b>5.D.1</b>	Given a set of data, find the median, mean, mode, maximum, minimum, and range, and apply to solutions of problems.	59-62 <b>SB:</b> 46-1 to 46-4		65 <b>SB:</b> 46-1

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<b>5.D.2</b>	Construct and interpret line plots, line graphs, and bar graphs. Interpret and label circle graphs.		37, 38 <b>SB:</b> 48-1 to 48-3	69, 70, 72, 73 <b>SB:</b> 47-2, 47-3, 47-5, 48-4, 48-5
<b>5.D.3</b>	Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a number cube) and test the predictions.		73-75 <b>SB:</b> 57-1, 57-3, 57-5	