



# Math Teachers Press, Inc.

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## Missouri Mathematics Learning Goals Correlated to Moving with Math Foundations for Algebra Middle/High (MH) Grade 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>CORE CONTENT A: REAL NUMBERS, LINEAR EQUATIONS, INEQUALITIES AND FUNCTIONS</b>					
<b>1.</b> Represent situations and solve problems that involve linear equations, inequalities and functions.					
<b>a.</b> Solve equations with rational coefficients that involve linear relationships.	48, 49 <b>SB:</b> 43-4, 43-6				41, 47 <b>SB:</b> 50-2, 50-4
<b>b.</b> Solve single- and multi-step word problems involving linear equations and verify the solutions.					
<b>c.</b> Solve inequalities with rational coefficients that involve non-linear relationships.					54, 55 <b>SB:</b> 50-5
<b>d.</b> Represent a linear function with a verbal description, table, graph, or symbolic expression, and make connections among these representations.					60-64 <b>SB:</b> 60-1
<b>e.</b> Determine the slope and y-intercept of a linear function described by a symbolic expression, table, verbal description or graph.					77

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<b>f.</b> Interpret the slope and y-intercept of a graph of a linear function representing a contextual situation.					
<b>g.</b> Identify the domain and range of a function.					
<b>2.</b> Develop an understanding of the real number system, including the notation associated with negative numbers, irrational numbers, and large and small numbers.					
<b>a.</b> Recognize that the set of real numbers is made up of rational and irrational numbers and that they can be represented by points on a number line.	6 SB: 1-3	55 SB: 65-1			
<b>b.</b> Identify a real number as rational or irrational based on the definition of rational numbers (numbers that can be expressed in the form $a/b$ where $a$ and $b$ are integers and $b$ is not equal to 0).		55 SB: 65-1			27 SB: 58-8
<b>c.</b> Convert rational numbers to terminating or repeating decimal form and use appropriate notation to indicate the repeating digit sequence.		52, 53 SB: 20-1, 20-2			
<b>d.</b> Extend/adapt algorithms for computing with positive rational numbers to negative rational numbers.					28-31 SB: 58-7
<b>e.</b> Represent and solve problems involving rational numbers and judge the reasonableness of the solutions.		22, 23, 35 SB: 43-1			

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<b>f.</b> Read, write, compare and order numbers represented in scientific notation, using positive and negative integer exponents for powers of 10, and interpret applications of scientific notation.	29, 30 <b>SB:</b> 57-1, 57-2				
<b>CORE CONTENT B: TRANSFORMATIONS</b>					
<b>1.</b> Apply knowledge of transformations in relating objects and in their effects on figures.					
<b>a.</b> Locate the images of figures produced by transformations including translations, reflections about a vertical or horizontal line, rotations about the origin, and simple composition of these transformations.				14 <b>SB:</b> 32-4	
<b>b.</b> Describe the effects of transformations including translations, reflections about a vertical or horizontal line, rotations about the origin, and simple composition of these transformations.				14 <b>SB:</b> 32-4	
<b>c.</b> Determine the coordinates of the image of a figure produced after a translation, a reflection about a vertical or horizontal line, or a rotation of a multiple of $90^\circ$ about the origin of the coordinate plane.				14 <b>SB:</b> 49-1	
<b>d.</b> Identify the corresponding parts (segments, angles, vertices) of the pre-image and image of a figure and identify the transformation that has occurred.				12 <b>SB:</b> 32-2	
<b>e.</b> Draw lines of symmetry and identify the angle of rotation in designs with rotational symmetry.				15, 16	

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<b>CORE CONTENT C: DISTANCE &amp; ANGLE MEASUREMENT</b>					
1. Develop and apply the Pythagorean Theorem to solve the lengths of sides in right triangles and related measurement problems.					
a. State the Pythagorean Theorem and justify it using a variety of methods.				34 <b>SB:</b> 54-2	
b. Apply the Pythagorean Theorem and its converse to solve problems.				35 <b>SB:</b> 54-2, 54-3	
c. Apply the Pythagorean Theorem to determine the distance between two points on the coordinate plane.					
<b>2. Solve problems involving angle measure.</b>					
a. Identify pairs of angles as complementary, supplementary, adjacent, or vertical and find missing angle measures by using these relationships.				17, 18 <b>SB:</b> 33-1	
b. Find the measure of angles formed when parallel lines are cut by a transversal and at least one angle measure is given.				19 <b>SB:</b> 33-2	
c. Identify, state, and apply the Angle-sum properties for triangles and other polygons.				20-22 <b>SB:</b> 52-1, 52-2, 52-3	
<b>CORE CONTENT D: BIVARIATE DATA</b>					

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<b>1.</b> Formulate questions involving two attributes, design experiments, collect, organize, and summarize bivariate data using numerical and graphical displays to represent the data.					
<b>a.</b> Design experiments and collect bivariate (two-variable) data to answer a question, classifying each attribute as a categorical or numerical variable.	<b>SB:</b> 70-1				
<b>b.</b> Identify, describe, and construct appropriate displays ( <i>two-way tables</i> , parallel <i>box plots</i> or <i>back-to-back stem-and-leaf plots</i> , and <i>scatterplots</i> ) for bivariate data.	75, 76 <b>SB:</b> 70-1				
<b>c.</b> Summarize data using statistics including five-number summaries and <i>inter-Quartile Range (IQR)</i> .					
<b>2.</b> Quantify the strength of association between two variables using a variety of tools, develop simple models for association between two numerical variables, and understand basic interpretations of measures of association.					
<b>a.</b> Quantify the strength of association between two variables and develop simple models using contingency tables (for categorical data) and the Quadrant Count Ratio (for numerical data) and simple models for examining the association between two numerical values such as simple lines (e.g., median-median line).					

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<p><b>b.</b> Describe the relationship between the two variables, the effects of outliers on the observed relationship, and distinguish between an "association" and "cause and effect."</p>						