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Missouri Mathematics Learning Goals Correlated to *Moving with Math Foundations for Algebra Intermediate/Middle (IM) Grade 6*

		IM1 *Number, Reasoning & Data* Student Book Skill Builders (SB)	IM2 *Fractions, Decimals & Percents* Student Book Skill Builders (SB)	IM3 *Geometry, Measurement & Graphing* Student Book Skill Builders (SB)
	CORE CONTENT A: MULTIPLICATION & DIVISION OF FRACTIONS & DECIMALS			
1.	Develop proficiency in multiplying and dividing fractions and decimals.			
a.	Estimate the results of computations with fractions and decimals and judge the reasonableness of the results.		25, 26, 36, 56, 65	
b.	Multiply and divide whole numbers and decimals by 1000, 100, 10, 1, 0.1, 0.01, and 0.001.	38 **SB:** 8-3, 10-7	63 **SB:** 27-4, 28-3, 28-7	
c.	Explain the relationship between multiplication and division and justify procedures for multiplying and dividing fractions and decimals.		28, 33, 57	
d.	Multiply and divide fractions and decimals proficiently.		29, 59, 62 **SB:** 27-4, 28-3, 28-7	
e.	Describe the effect of multiplying or dividing by a number between zero and one, by one, and a number greater than one.		30, 34, 63 **SB:** 19-2, 20-1, 20-3, 27-2	
f.	Solve single- and multi-step word problems involving multiplication and division of fractions and decimals and verify the solutions.		36, 65, 66 **SB:** 45-3, 45-8, 45-9	
	CORE CONTENT B: RATIOS, RATES AND PERCENTS			
1.	Understand and use ratios to represent quantitative relationships.			
a.	Identify and write ratios as comparisons of part-to-part and part-to-whole relationships using appropriate notation to describe problem situations.			56 **SB:** 52-1
b.	Justify why two different pairs of numbers may be used to represent the same ratio.			56

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c.	Solve single- and multi-step word problems involving ratios and rates.			56-59 **SB:** 52-3
d.	Represent and model ratios associated with whole-number percents that are less than or equal to 100%.		67, 72 **SB:** 29-2	
2.	Demonstrate flexibility with fractions, decimals, and percents.			
a.	Move flexibly between and among the fractional, decimal, and percent representations of a number in mathematical and contextual situations.		47, 68-70 **SB:** 25-2, 30-1, 30-3	
b.	Compare and order fractions, decimals, and percents and find their approximate locations on a number line.		5, 10, 43, 49 **SB:** 13-2, 21-2	
	CORE CONTENT C: EXTENDING PROPERTIES & MEASURES OF TWO-DIMENSIONAL FIGURES			
1.	Represent, identify and classify geometric figures from written or verbal descriptions, measurements, and properties using sketches, figures represented on the coordinate plane, grids, or models.			
a.	Identify and use properties (including congruency, parallelism, perpendicularity, and symmetry) to classify quadrilaterals and triangles.			8, 9 **SB:** 34-3, 34-4, 34-5
b.	Draw or create two-dimensional figures or models with specified measures and properties including the use of first-quadrant coordinates			3, 15 **SB:** 32-4
c.	Measure angles using a protractor and other appropriate tools.			6 **SB:** 37-2
2.	Develop and apply formulas for perimeter and area of triangles, quadrilaterals with at least one pair of parallel sides, circles, and composite figures made from these shapes.			
a.	Describe the relationship between the circumference and diameter of a circle (circumference = π x diameter) and use this relationship to develop general formulas such as C = 2π r or C = π d and A = π r^2.			14 (T.G.) **SB:** 38-12

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b.	Describe relationships between the areas of various polygons (e.g., parallelogram and rectangle or triangle and parallelogram with the same base and height			47, 48 **SB:** 38-7, 38-10
c.	Determine the area of quadrilaterals and triangles using appropriate units of measure and solve single- and multi-step word problems involving measures of these figures.			46, 47 **SB:** 38-6, 38-11
d.	Determine the circumference and area of circles using appropriate units of measure and solve single- and multi-step word problems involving the relationships among the radius, diameter, circumference and area of circles.			**SB:** 38-12
	CORE CONTENT D: POLYNOMIAL EXPRESSIONS AND EQUATIONS			
1.	Write polynomial expressions and equations that correspond to a given situation; evaluate and simplify expressions.			
a.	Write mathematical expressions and equations with variables to represent a given situation.	50, 70 **SB:** 45-12, 56-1, 56-5		
b.	Simplify expressions using properties (associative, commutative, distributive) and operation.	20 **SB:** 5-1, 5-2		
c.	Evaluate mathematical expressions (using substitution when variables are involved) applying the commutative, associative, and distributive properties and order of operations.			
d.	Solve simple equations generated from representing situations mathematically using informal strategies (e.g., guess and check, working backwards).	71 **SB:** 45-14, 56-2		
	CORE CONTENT E: SAMPLE SURVEYS & DATA DISTRIBUTIONS			
1.	Formulate questions, identify the numerical attributes on which to collect data, decide how to measure the attribute , determine and implement a data collection process.			
a.	Design, conduct and evaluate sample surveys.	61 **SB:** 46-5		66 **SB:** 47-5

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b.	Distinguish between a *population* and *sample*, identify methods of sample selection and sources of bias associated with non-random selection.			67 **SB:** 47-4
2.	Compare two or more data distributions using displays and numerical summaries and describe differences between them with respect to center, spread, and shape. Recognize limitations in the scope of inference beyond the experiment.			
a.	Summarize and compare distributions using numerical summaries and data displays, including relative frequency tables, box plots, circle graphs (pie charts), back-to-back stem-and-leaf plots, double bar graphs, and histograms.			66, 71 **SB:** 47-2, 47-3
b.	Quantify measures of center (mean, median, and mode), and interpret the meaning of these measures in context, explain the influences of outliers on each measure, and justify which statistic is more appropriate for summarizing a given data set.	60-62 **SB:** 46-2, 46-3, 46-4		65
c.	Describe how mean, median, mode or range relates to the shape of the distribution.			
d.	Distinguish between interpretations of the mean as the "fair share" value for data and as the "balancing point" of the corresponding data distribution.			