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Missouri Mathematics Learning Goals Correlated to *Moving with Math Foundations for Algebra Intermediate/Middle (IM) Grade 5*

	IM1 <i>Number, Reasoning & Data Student Book Skill Builders (SB)</i>	IM2 <i>Fractions, Decimals, Percent, and Probability Student Book Skill Builders (SB)</i>	IM3 <i>Geometry, Measurement & Graphing Student Book Skill Builders (SB)</i>
CORE CONCEPT A: DIVISION OF WHOLE NUMBERS			
1. Understand multi-digit division (with divisors to 100 and dividends to 10,000).			
a. Make connections among representations of multi-digit division situations with objects, diagrams, words, expressions, and equations.	42, 43, 46 SB: 10-1, 10-5		
b. Describe the effect of dividing by 10 or 100 on the quotient.	44 SB: 10-7		
c. Analyze a variety of strategies (including a standard algorithm) for division in order to demonstrate their similarities and differences, and to draw conclusions about their efficiency, accuracy, and generalizability.	45		
d. Explain and justify multi-digit division strategies on the basis of place value, relationships among operations, and properties of operations (identity, distributive).	42, 43		
2. Understand, explain, and use a variety of strategies to compute division problems proficiently (divisors to 100 and dividends to 10,000).			
a. Apply and explain efficient strategies, including a standard algorithm, to divide with two-digit divisors proficiently.	45-48 SB: 10-2		
b. Express remainders as whole numbers or fractions and interpret remainders appropriately in contextual problems.	49 SB: 10-4		

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c.	Estimate products and quotients and/or calculate them mentally depending on the context and numbers involved; use estimates to judge the reasonableness of solutions.	51-53 SB: 50-1, 50-2, 50-3		
d.	Recognize and apply the meaning of relational signs (=, ≠, <, >) as distinct from operational signs (+, -, ×, ÷) and interpret the meaning of these symbols as true or false in a variety of equations and inequalities (e.g., $12 \div 4 = 3$ is true; $12 \div 4 \neq 3$ is false).	7		
e.	Find the unknown quantity in a variety of simple equations ($16 \times 4 = \underline{\quad}$; $24 = 48 \div \underline{\quad}$; $\underline{\quad} = 7 \times 21$; $4 \times 13 = \underline{\quad} \times 2$) that involve operations with whole numbers.	20, 33 SB: 5-2		
f.	Create single- and multi-step contextual problems involving addition, subtraction, multiplication and/or division of whole numbers.	42 (T.G.), 49 (T.G.)		
g.	Solve single- and multi-step contextual problems involving addition, subtraction, multiplication and/or division of whole numbers.	29, 30, 55-58 SB: 45-2, 45-8		
CORE CONTENT B: ADDITION & SUBTRACTION OF FRACTIONS & DECIMALS				
1.	Understand, explain, and apply strategies to add and subtract fractions proficiently (including mixed numbers with like and unlike denominators).			
a.	Make connections among representations of fraction addition and subtraction situations with objects, diagrams, words, expressions and equations.		14, 15 SB: 15-1, 15-2, 15-3	
b.	Apply concepts of common multiples, common factors, prime and composite numbers as needed to support the addition and subtraction of fractions.		8, 18 SB: 4-2, 12-2, 13-4	
c.	Analyze a variety of strategies, including standard algorithms, for addition and subtraction of fractions in order to demonstrate their similarities and differences, and to draw conclusions about their efficiency, accuracy, and generalizability.		17, 21	

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d.	Apply and explain efficient strategies, including standard algorithms, to add and subtract fractions, including mixed numbers, proficiently.		14-23 SB: 15-1, 15-2, 15-3, 16-1, 16-2	
e.	Estimate fraction sums and differences and/or calculate them mentally, depending on the context and numbers involved; use estimates to judge the reasonableness of solutions.		25-27 SB: 18-4, 45-3, 45-10	
f.	Create contextual problems for a variety of mathematical situations (combining, missing addend, separating, comparing, and relating parts with wholes) involving fractions for which any one of the quantities is unknown.		23 (T.G.)	
g.	Proficiently solve contextual problems for a variety of mathematical situations (combining, missing addend, separating, comparing, and relating parts with wholes) involving fractions for which any one of the quantities is unknown.		25-27 SB: 17-3, 45-1	
2.	Understand, explain, and apply strategies to add and subtract decimals proficiently.			
a.	Make connections among representations of decimal addition and subtraction situations with objects, diagrams, words, expressions and equations.		54-56 SB: 26-2, 26-3	
b.	Relate the addition and subtraction of decimals to the addition and subtraction of fractions.		54 (T.G.)	
c.	Analyze a variety of strategies, including standard algorithms, for addition and subtraction of decimals in order to demonstrate their similarities and differences, and to draw conclusions about their efficiency, accuracy, and generalizability.		54-56 SB: 26-2, 26-3	
d.	Apply and explain efficient strategies, including standard algorithms, to add and subtract decimals proficiently.		54 SB: 26-2, 26-3	
e.	Estimate decimal sums and differences and/or calculate them mentally, depending on the context and numbers involved; use estimates to judge the reasonableness of solutions.		56 SB: 45-5	

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f.	Create contextual problems for a variety of mathematical situations (combining, missing addend, separating, comparing, and relating parts with wholes) involving decimal numbers for which any one of the quantities is unknown.		55 (T.G.)	
g.	Proficiently solve contextual problems for a variety of mathematics situations (combining, missing addend, separating, comparing, and relating parts with wholes) involving decimal numbers for which any one of the quantities is unknown.		54-56 SB: 26-2, 26-3, 26-4, 45-2	
CORE CONTENT C: PROPERTIES OF THREE-DIMENSIONAL SHAPES, VOLUME & SURFACE AREA				
1.	Understand the properties of three-dimensional shapes.			
a.	Determine the number of edges, faces, and vertices of a given polyhedron.			12
b.	Identify the types of faces of a given polyhedron.			12
c.	Compose larger polyhedra from smaller ones; decompose larger polyhedra into smaller ones.			
d.	Analyze and compare three-dimensional shapes on the basis of their edges, faces, and vertices.			12
e.	Relate rectangular prisms to the two-dimensional shapes (nets) from which they can be created.			12 SB: 34-7
2.	Understand and explain the concepts of surface area and volume as they relate to rectangular prisms.			
a.	Use area concepts to solve problems involving surface areas (areas of nets) of rectangular prisms.			54 SB: 39-4
b.	Find the volume of rectangular prisms by using cubic units to fill them, with no gaps or overlaps, then counting the total number of units.			52, 53 SB: 39-2, 39-5
c.	Identify, organize, and use the underlying structure of cubes filling a rectangular prism (a series of layers) to find the volume of rectangular prisms.			53 SB: 39-2, 39-5

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d.	Solve problems that involve estimating or physically measuring the volume of rectangular prisms.			SB: 39-2
e.	Distinguish among appropriate units for linear, area, and volume measurement situations.			SB: 38-8
CORE CONTENT D: BASIC PROBABILITY CONCEPTS				
1.	Understand and explain that probability is a measurement of the likelihood of events and that the probability of an event is based on the set of all possible events called the sample space.			
a.	List all possible outcomes for simple experiments (e.g., predicting sums when rolling two number cubes).		73, 75 SB: 57-1, 58-1, 58-4	
b.	Recognize whether an outcome of an experiment or simulation is <i>impossible</i> , <i>unlikely</i> , <i>possible</i> , <i>likely</i> , or <i>certain</i> , and whether two or more events are <i>equally likely</i> .		73	
c.	Represent the probability of an event which ranges from 0 (<i>impossible</i>) to 1 (<i>certain</i>), with a fraction, decimal, or percent.		73 SB: 57-1	
d.	Predict the likelihood of an outcome prior to an experiment and compare the predicted probability with the experimental results.		75 SB: 57-3	