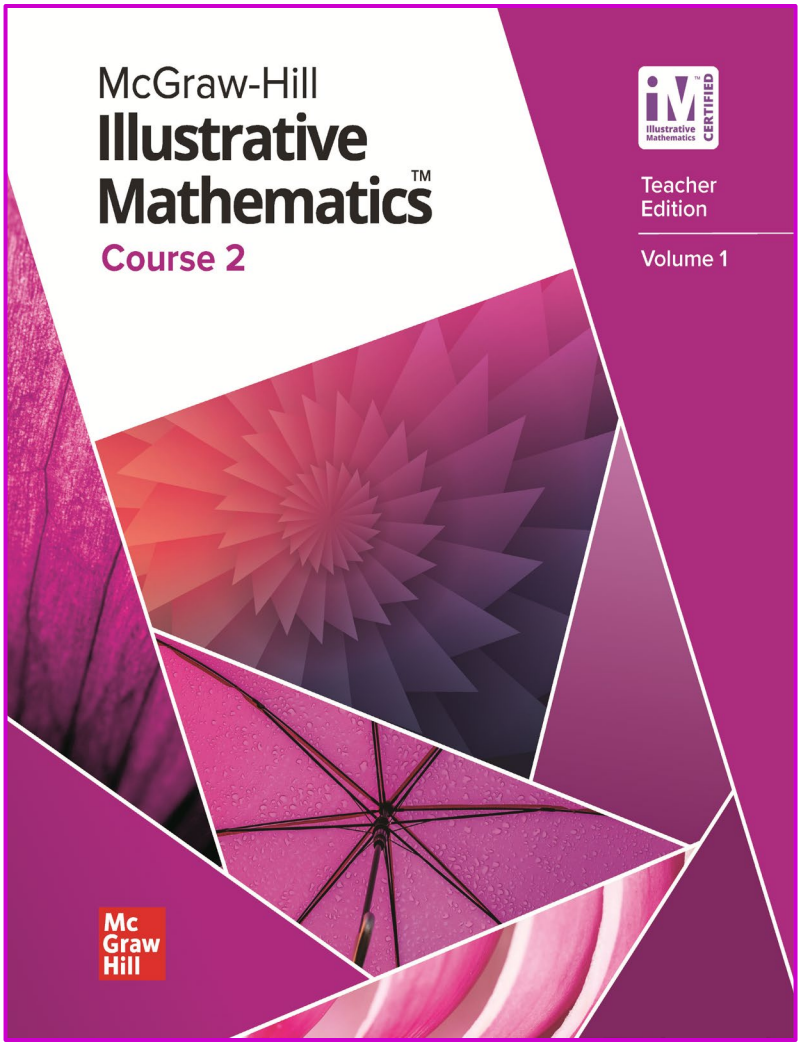

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Mathematics Standards
Grade 7

STANDARDS	MODULE-LESSON
Algebraic Reasoning: Expressions and Equations (7.AEE)	
7.AEE.A Use properties of operations to generate equivalent expressions.	
7.AEE.A.1 Identify and write equivalent expressions with rational numbers by applying associative, commutative, and distributive properties.	6-18, 6-19, 6-20, 6-21, 6-22, 9-7
7.AEE.A.2 Understand that rewriting an expression in different forms in a contextual problem can show how quantities are related.	6-12
7.AEE.B Solve mathematical problems in authentic contexts using numerical and algebraic expressions and equations.	
7.AEE.B.3 Write and solve problems in authentic contexts using expressions and equations with positive and negative rational numbers in any form. Contexts can be limited to those that can be solved with one or two-step linear equations.	3-11, 5-12, 5-17, 6-2, 6-3, 6-4, 6-5, 6-6, 6-11, 6-12
7.AEE.B.4 Use variables to represent quantities and construct one- and two-step linear inequalities with positive rational numbers to solve authentic problems by reasoning about the quantities.	5-7, 5-15, 6-1, 6-2, 6-3, 6-5, 6-9, 6-11, 6-12, 6-13, 6-15, 7-5, 9-3
Proportional Reasoning: Ratios and Proportions (7.RP)	
7.RP.A Analyze proportional relationships and use them to solve mathematical problems in authentic contexts.	
7.RP.A.1 Solve problems in authentic contexts involving unit rates associated with ratios of fractions.	2-7, 2-8, 2-12, 4-1, 4-2, 4-3, 9-5
7.RP.A.2 Recognize and represent proportional relationships between quantities in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. Identify the constant of proportionality (unit rate) within various representations.	1-6, 1-8, 2-2, 2-3, 2-5, 2-10, 3-1, 3-3, 3-5, 3-7, 4-1
7.RP.A.3 Use proportional relationships to solve ratio and percent problems in authentic contexts.	1-10, 3-1, 3-5, 4-4, 4-5, 4-6, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 4-13, 4-14, 4-15, 4-16, 9-1, 9-2, 9-3, 9-4, 9-6, 9-8, 9-13
7.RP.B Investigate chance processes and develop, use, and evaluate probability models.	
7.RP.B.4 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Represent probabilities as fractions, decimals, and percents.	8-2, 8-3, 8-4, 8-5, 8-6

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STANDARDS	MODULE-LESSON
7.RP.B.5 Use experimental data and theoretical probability to make predictions. Understand the probability predictions may not be exact.	8-1, 8-3, 8-4, 8-5, 8-6
7.RP.B.6 Develop a probability model and use it to find probabilities of events. Compare theoretical and experimental probabilities and explain possible sources of discrepancy if any exists.	8-3, 8-4, 8-5, 8-14
7.RP.B.7 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	8-8, 8-9
Numeric Reasoning: Number Systems (7.NS)	
7.NS.A Apply and extend previous understandings of operations with fractions.	
7.NS.A.1 Apply and extend previous understandings of addition, subtraction and absolute value to add and subtract rational numbers in authentic contexts. Understand subtraction as adding the additive inverse, p – q = p + (–q).	5-1, 5-2, 5-4, 5-5, 5-6, 6-18, 7-6
7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Interpret operations of rational numbers solving problems in authentic contexts.	5-9, 5-11
7.NS.A.3 Understand that equivalent rational numbers can be written as fractions, decimals and percents.	4-5, 5-1, 8-16, 9-4
Geometric Reasoning and Measurement (7.GM)	
7.GM.A Draw, construct, and describe geometrical figures and describe the relationships between them.	
7.GM.A.1 Solve problems involving scale drawings of geometric figures. Reproduce a scale drawing at a different scale and compute actual lengths and areas from a scale drawing.	1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 2-1, 3-6, 3-11, 9-4, 9-13
7.GM.A.2 Draw triangles from three measures of angles or sides. Understand the possible side lengths and angle measures that determine a unique triangle, more than one triangle, or no triangle.	3-2, 7-6, 7-7, 7-8, 7-9, 7-10, 7-17
7.GM.B Solve mathematical problems in authentic contexts involving angle measure, area, surface area, and volume.	
7.GM.B.3 Understand the relationship between area and circumference of circles. Choose and use the appropriate formula to solve problems with radius, diameter, circumference and area of circles.	3-1, 3-2, 3-3, 3-4, 3-5, 3-7, 3-8, 3-9, 3-10, 3-11

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STANDARDS	MODULE-LESSON
7.GM.B.4 Apply facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to determine an unknown angle in a figure.	7-1, 7-2, 7-3, 7-4, 7-5
7.GM.B.5 Solve problems in authentic contexts involving two- and three-dimensional figures. Given formulas, calculate area, volume and surface area.	1-6, 1-10, 2-8, 3-6, 7-11, 7-12, 7-13, 7-14, 7-15, 7-16, 7-17, 9-4, 9-5, 9-9
Data Reasoning (7.DR)	
7.DR.A Formulate Statistical Investigative Questions.	
7.DR.A.1 Formulate summary, comparative investigative questions to gain information about a population and that a sample is valid only if the sample is representative of that population.	8-12, 8-13, 8-14, 8-15, 8-16, 8-20
7.DR.B Collect and Consider Data	
7.DR.B.1 Collect or consider data from a random sample to compare and draw inferences about a population with an unknown characteristic of interest.	8-12, 8-13, 8-14, 8-15, 8-16, 8-20
7.DR.C Analyze, summarize, and describe data.	
7.DR.C.2 Analyze two data distributions visually to compare multiple measures of center and variability.	8-15, 8-17, 8-18, 8-19
7.DR.D Interpret data and answer investigative questions.	
7.DR.D.4 Interpret measures of center and measures of variability for numerical data from random samples to compare between two populations, and to answer investigative questions.	8-15, 8-17, 8-18, 8-19

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