

Grade 6 Mathematics MCA-III Achievement Level Descriptors

699		Number and Operation
662	Meets State Standard	Exceeds the Standard Recognizes when it is appropriate to apply the concept of factoring; sees connection between factoring and application in a problem solving situation; efficiently translates between fraction, decimal, and percent forms of positive rational number to solve problems; compares ratios and understands their relationship to fractions; recognizes ratios in context.
650	Meets State Standard	Meets the Standard Understands the concept of factors and factoring (composing and decomposing numbers); determines equivalences among fractions, decimals, and percents but reverts to one representation to solve problems (e.g., changes everything to decimals); creates ratio to represent situation when given key words in context; understands concept of ratio.
640	Does Not Meet State Standard	Partially Meets the Standard Names pairs of factors of numbers (e.g., $12 = 2 \times 6$, $12 = 3 \times 4$); recognizes equivalences among common fractions, decimals, and percents; recognizes a ratio (only) in numeric form; solves unit rate problems in a straight-forward context (division).
601	Does Not Meet State Standard	Does Not Meet the Standard Can only name common pairs of factors of a given number (e.g., $12 = 3 \times 4$); uses decimals to separate numbers (e.g., $\frac{3}{4} = 3.4$); sees decimal in money context only; solves ratio or rate problems as multiplication and division problems.

699		Geometry & Measurement
662	Meets State Standard	Exceeds the Standard Determines area and perimeter of irregular shapes; determines surface area; understands and uses relationships between angles in geometric figures; converts among units of measure within a measurement system.
650	Meets State Standard	Meets the Standard Recognizes and applies formulas for two- and three-dimensional figures; determines area and perimeter of irregular shapes when key is one-square unit; recognizes vocabulary associated with angles; knows basic conversions among units within a measurement system (e.g., feet to inches, centimeters to meters).
640	Does Not Meet State Standard	Partially Meets the Standard Calculates area and volume for basic figures (rectangles) when dimensions are provided; determines area and perimeter of irregular shapes by counting; calculates surface area when a net is provided; converts between feet and inches, hours and minutes.
601	Does Not Meet State Standard	Does Not Meet the Standard When determining area and perimeter of irregular shapes, counts by whole numbers (part is whole, diagonal is always one unit); associates 180 degrees with a triangle and 90 degrees with a right angle; finds one missing angle if given the other two in a triangle; given a problem requiring unit conversion, will multiply or divide.

699		Algebra
662	Meets State Standard	Exceeds the Standard Interprets equations and inequalities with multiple unknowns; understands that solving for a variable is not always the answer to the question.
650	Meets State Standard	Meets the Standard Represents relationships between varying quantities using equations and inequalities, involving variables, graphs, and verbal descriptions; uses the properties of arithmetic as well as order of operations to generate equivalent expressions and to solve problems.
640	Does Not Meet State Standard	Partially Meets the Standard Solves one-step problems in straightforward situations; uses computational facts, instead of equality, to find solutions; recognizes patterns (e.g., multiplicative and additive patterns); recognizes relationships between varying quantities represented in tables, graphs, or verbal descriptions.
601	Does Not Meet State Standard	Does Not Meet the Standard Understands concept of variable as a place holder for an answer; recognizes patterns (additive) within lists of numbers; occasionally solves one-step problems in very familiar situations (money); can find missing whole number based on number facts, not algebraic properties.

699		Data Analysis & Probability
662	Meets State Standard	Exceeds the Standard Represents probabilities in real-world problems, including determining sample space in a variety of ways; understands concept of probability; solves problems involving compound probability.
650	Meets State Standard	Meets the Standard Determines sample space; understands simple probability in fractions, decimals, and percents.
640	Does Not Meet State Standard	Partially Meets the Standard Determines sample space (i.e., the set of all possible outcomes) in a simple and very familiar context; understands simple probability expressed in fractional form.
601	Does Not Meet State Standard	Does Not Meet the Standard Determines probability as a fraction when sample space is given.