# **College and Career Readiness Standards Rubrics:**

# **CCR Mathematical Practice Standards**

| **Standard** | **Basic** | **Developing** | **Proficient** | **Mastery** |
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| **CCR MP Anchor 1: Make sense of problems and persevere in solving them**  | * Explains part of thought processes in solving a problem but is unable to reach a solution
* Starts a problem but does not stay with it past first attempt
 | * Explains thought processes and identifies relevant information but cannot reach a solution
* Stays with a problem for more than one attempt; seeks assistance early in the second attempt.
 | * Explains thought processes and represents solutions in choosing a strategy based on the mathematical situation in the task.
* Tries several approaches finding a solution; seeks hints when stuck.
 | * Discusses and demonstrates solving a problem using the most efficient strategy based on the mathematical situation.
* Struggles with various attempts over time, continues to try multiple approaches, learns from previous solution attempts and applies that knowledge to the final solution.
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| **CCR MP Anchor 2: Reason abstractly and quantitatively** | * Uses models or pictorial representations to solve problems
 | * Translates situations into symbols for solving problems that are constructed with a basic mathematical basis.
 | * Converts situations into symbols to appropriately solve problems as well as converts symbols into meaningful situations that are constructed with an adequate mathematical basis. There is a loose approach or justification of correct reasoning.
 | * Problems are converted using appropriate/meaningful symbols and are constructed with adequate mathematical basis. There is a systematic approach and/or justification of correct reasoning.
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| **CCR MP Anchor 3: Construct viable arguments and critique the reasoning of others.** | * Explains reasoning with weak or incorrect logic
* Follows and discusses other ideas and approaches.
 | * Correctly explains thinking for the solution found
* Explains other students’ solutions and identifies strengths and weaknesses of the solution utilizing some mathematical vocabulary
 | * Explains own thinking and thinking of others with accurate vocabulary.
* Compares and contrasts various solution strategies and explains the reasoning of others using mathematical vocabulary.
 | * Justifies and explains, with accurate language and vocabulary, why solution is correct. Explanations include sound mathematical reasoning.
* Compares and contrasts various solution strategies using correct mathematical vocabulary and methods when explaining the reasoning of others
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| **CCR MP Anchor 4: Model with Mathematics** | * Uses a simple model to represent and solve a problem.
 | * Uses models to represent and solve a problem, and translates the solution to mathematical symbols
 | * Uses models and symbols to represent and solve a problem, and accurately explains the solution representation using some mathematical language.
 | * Uses a variety of models, symbolic representations, and technological tools to demonstrate a systematic approach to find a solution to a problem. Uses formal mathematical language throughout explanation of the solution.
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| **CCR MP Anchor 5: Use appropriate tools strategically** | * Uses a tool to find a solution. The tool may not be the best tool or may be used incorrectly.
 | * Uses the appropriate tool correctly to find a solution
 | * When selecting from a variety of tools uses prior knowledge to select the ones that can be used to solve a problem, and explains reasoning with mathematical vocabulary for the selection
 | * Uses prior knowledge of math practices to plan a correct strategy combining various tools, including technology, explores and solves a problem as well as justifies tool selection and problem solution using correct mathematical vocabulary.
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