**Performance Standards for Stage 1 Essential Mathematics**

| - | **Concepts and Techniques** | **Reasoning and Communication** |
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| **A** | Knowledge and understanding of mathematical information and concepts in familiar and unfamiliar contexts.  Highly effective application of mathematical skills and techniques to find efficient and accurate solutions to routine and complex problems in a variety of contexts.  Gathering, representation, and interpretation of a range of data in familiar and unfamiliar contexts.  Appropriate and effective use of electronic technology to find accurate solutions to routine and complex problems. | Accurate interpretation of mathematical results in familiar and unfamiliar contexts.  Highly effective use of mathematical reasoning to draw conclusions and consider the appropriateness of solutions to routine and complex problems.  Proficient and accurate use of appropriate mathematical notation, representations, and terminology.  Clear and effective communication of mathematical ideas and information to develop logical and concise arguments. |
| **B** | Knowledge and understanding of mathematical information and concepts in familiar and some unfamiliar contexts.  Effective application of mathematical skills and techniques to find mostly accurate solutions to routine and some complex problems in a variety of contexts.  Gathering, representation, and interpretation of data in familiar and some unfamiliar contexts.  Mostly appropriate and effective use of electronic technology to find mostly accurate solutions to routine and some complex problems. | Mostly accurate interpretation of mathematical results in familiar and some unfamiliar contexts.  Effective use of mathematical reasoning to draw conclusions and consider the appropriateness of solutions to routine and some complex problems.  Mostly accurate use of appropriate mathematical notation, representations, and terminology.  Clear and appropriate communication of mathematical ideas and information to develop some logical arguments. |
| **C** | Knowledge and understanding of simple mathematical information and concepts in familiar contexts.  Application of some mathematical skills and techniques to find solutions to routine problems in familiar contexts.  Gathering, representation, and interpretation of data in familiar contexts.  Generally appropriate and some effective use of electronic technology to find solutions to routine problems. | Generally accurate interpretation of mathematical results in familiar contexts.  Appropriate use of mathematical reasoning to draw conclusions and consider the appropriateness of solutions to routine problems.  Generally appropriate use of familiar mathematical notation, representations, and terminology.  Appropriate communication of mathematical ideas and information. |
| **D** | Basic knowledge and some understanding of simple mathematical information and concepts in some familiar contexts.  Application of basic mathematical skills and techniques to find partial solutions to routine problems in some contexts.  Some gathering, representation, and basic interpretation of simple data in familiar contexts.  Some appropriate use of electronic technology to find solutions to routine problems. | Some interpretation of mathematical results in some familiar contexts.  Attempted use of mathematical reasoning to consider the appropriateness of solutions to routine problems.  Some use of familiar mathematical notation, representations, and terminology.  Attempted communication of simple mathematical ideas and information. |
| **E** | Limited knowledge or understanding of mathematical information or concepts.  Attempted application of basic mathematical skills or techniques, with limited accuracy in solving routine problems.  Some gathering and attempted representation of simple data in a familiar context.  Attempted use of electronic technology to find a solution to a routine problem. | Limited interpretation of mathematical results.  Limited awareness of the use of mathematical reasoning in solving a problem.  Limited use of mathematical notation, representations, or terminology.  Attempted communication of an aspect of mathematical information. |