**Number In bold** are expectations to be met in all strands

|  |  |  |  |
| --- | --- | --- | --- |
| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| * **Fluently uses precise mathematical language correctly**
* **Independently and consistently makes connections among concrete, pictorial and symbolic representations**
* **Independently considers and applies alternative strategies to solve a range of complex and unfamiliar problems**
* **Independently makes connections between and within the different strands of mathematics**
* Consistently represents, compares and orders a wide range of whole numbers, integers, decimals, mixed numbers, and fractions accurately.
* Makes connections between a wide range of fractions, decimals, whole numbers, mixed numbers, ratios, percent, and integers
* Consistently uses benchmarks and patterns effectively and efficiently
* Makes efficient, logical estimates to predict outcomes and check for reasonableness
* Uses strategies efficiently and effectively
* Consistently explains strategies and reasoning with clarity, precision, and thoroughness
* Few calculation errors or omissions, and are minor
 | * **Routinely uses mathematical language correctly**
* **Makes connections among concrete, pictorial and symbolic representations**
* **Routinely selects and applies appropriate strategies to solve problems**
* **Makes connections between and within the different strands of mathematics**
* Routinely represents, compares and orders whole numbers, integers, decimals, mixed numbers, and fractions accurately
* Makes connections between fractions, decimals, whole numbers, mixed numbers, ratios, percent, and integers
* Routinely uses benchmarks and patterns effectively
* Routinely makes effective, logical estimates to predict outcomes and check for reasonableness
* Routinely uses strategies effectively
* Routinely explains strategies and reasoning with clarity
* Calculation errors or omissions are minor
 | * **Inconsistently uses correct mathematical language**
* **Sometimes makes connections among concrete, pictorial and symbolic representations**
* **Sometimes selects and applies appropriate strategies to solve problems**
* **Sometimes makes connections between and within the different strands of mathematics**
* Sometimes represents, compares and orders whole numbers, integers, decimals, mixed numbers, and fractions accurately; may require pictorial or other representations
* Sometimes makes connections between fractions, decimals, whole numbers, mixed numbers, ratios, percent, and integers
* Occasionally uses benchmarks and patterns
* Sometimes makes effective, logical estimates to predict outcomes and check for reasonableness
* Sometimes uses strategies effectively
* Sometimes explains strategies and reasoning, or explanations may be incomplete
* Calculation errors or omissions may include some major
 | * **Rarely uses correct mathematical language**
* **Has difficulty making connections among concrete, pictorial and symbolic representations**
* **Rarely selects or applies appropriate strategies to solve problems**
* **Rarely makes connections between and within the different strands of mathematics**
* Has difficulty representing, comparing and ordering whole numbers, integers, decimals, mixed numbers, and fractions accurately, even with concrete or pictorial representations
* Rarely makes connections between fractions, decimals, whole numbers, mixed numbers, ratios, percent, and integers
* Not able to use benchmarks and patterns
* Rarely makes logical estimates to predict outcomes or check for reasonableness
* Has difficulty using strategies effectively
* Has difficulty explaining strategies and reasoning
* Calculation errors or omissions are major
 |

**Patterns and Relations** **In bold** are expectations to be met in all strands

|  |  |  |  |
| --- | --- | --- | --- |
| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| * **Fluently uses precise mathematical language correctly**
* **Independently and consistently makes connections among concrete, pictorial and symbolic representations**
* **Independently considers and applies alternative strategies to solve a range of complex and unfamiliar problems**
* **Independently makes connections between and within the different strands of mathematics**
* Makes connections among a wide range of representations of patterns (symbolic, tables, charts, pictorial, concrete)
* Includes precise labels and headings in tables, graphs and other representations
* Uses patterns and relationships to solve a wide range of problems
* Consistently explains patterns and reasoning with clarity, precision, and thoroughness
* Consistently represents a wide variety of relationships using equations and variables (including equivalent equations)
* Few errors or omissions, and are minor
 | * **Routinely uses mathematical language correctly**
* **Makes connections among concrete, pictorial and symbolic representations**
* **Routinely selects and applies appropriate strategies to solve problems**
* **Makes connections between and within the different strands of mathematics**
* Makes connections among various representations of patterns (symbolic, tables, charts, pictorial, concrete)
* Routinely includes appropriate labels and headings in tables, graphs and other representations
* Uses patterns and relationships to solve problems
* Routinely explains patterns and reasoning with clarity
* Routinely represents relationships using equations and variables (including equivalent equations)
* Errors or omissions are minor
 | * **Inconsistently uses correct mathematical language**
* **Sometimes makes connections among concrete, pictorial and symbolic representations**
* **Sometimes selects and applies appropriate strategies to solve problems**
* **Sometimes makes connections between and within the different strands of mathematics**
* Sometimes makes connections among various representations of patterns (symbolic, tables, charts, pictorial, concrete)
* Sometimes includes appropriate labels and headings in tables, graphs and other representations
* Sometimes uses patterns and relationships to solve problems
* Sometimes explains patterns and reasoning
* Sometimes or with prompting represents relationships using equations and variables (including equivalent equations)
* Errors or omissions may include some major
 | * **Rarely uses correct mathematical language**
* **Has difficulty making connections among concrete, pictorial and symbolic representations**
* **Rarely selects or applies appropriate strategies to solve problems**
* **Rarely makes connections between and within the different strands of mathematics**
* Has difficulty making connections among various representations of patterns (symbolic, tables, charts, pictorial, concrete)
* Rarely includes labels and headings in tables, graphs and other representations
* Not able to use patterns and relationships to solve problems
* Has difficulty explaining patterns and reasoning
* Has difficulty representing relationships using equations and variables (including equivalent equations)
* Errors or omissions are major
 |

**Shape and Space** **In bold** are expectations to be met in all strands

|  |  |  |  |
| --- | --- | --- | --- |
| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| * **Fluently uses precise mathematical language correctly**
* **Independently and consistently makes connections among concrete, pictorial and symbolic representations**
* **Independently considers and applies alternative strategies to solve a range of complex and unfamiliar problems**
* **Independently makes connections between and within the different strands of mathematics**
* Consistently solves a wide range of problems involving perimeter, area and volume
* Independently and with ease estimates, uses referents, and measures angles, recording with unit
* Consistently explains strategies and reasoning with clarity, precision, and thoroughness
* Uses attributes to correctly describe and compare triangles and a wide range of other polygons
* Routinely identifies, describes, predicts and draws transformations (including on a Cartesian plane) of a wide range of shapes
* Uses precise labels (including units) in diagrams, drawings are proportional
* Few errors or omissions, and are minor
 | * **Routinely uses mathematical language correctly**
* **Makes connections among concrete, pictorial and symbolic representations**
* **Routinely selects and applies appropriate strategies to solve problems**
* **Makes connections between and within the different strands of mathematics**
* Routinely solves problems involving perimeter, area and volume
* Routinely estimates, uses referents, and measures angles, recording with unit
* Routinely explains strategies and reasoning with clarity
* Uses attributes to describe and compare triangles and other polygons
* Routinely identifies, describes, predicts and draws transformations (including on a Cartesian plane)
* Routinely uses appropriate labels (including units) in diagrams, drawings are proportional
* Errors or omissions are minor
 | * **Inconsistently uses correct mathematical language**
* **Sometimes makes connections among concrete, pictorial and symbolic representations**
* **Sometimes selects and applies appropriate strategies to solve problems**
* **Sometimes makes connections between and within the different strands of mathematics**
* Sometimes or with prompting solves problems involving perimeter, area and volume
* Sometimes estimates, uses referents, and measures angles, recording with unit
* Sometimes explains strategies and reasoning, or explanations may be incomplete
* Sometimes or with prompting uses attributes to correctly describe and compare triangles and other polygons
* Sometimes or with prompting identifies, describes, predicts and draws transformations (including on a Cartesian plane)
* Sometimes uses appropriate labels (including units) in diagrams, drawings may not be proportional
* Errors or omissions may include some major
 | * **Rarely uses correct mathematical language**
* **Has difficulty making connections among concrete, pictorial and symbolic representations**
* **Rarely selects or applies appropriate strategies to solve problems**
* **Rarely makes connections between and within the different strands of mathematics**
* Has difficulty solving problems involving perimeter, area and volume
* Has difficulty estimating, using referents, and measuring angles, recording with unit
* Has difficulty explaining strategies and reasoning
* Has difficulty using attributes to correctly describe and compare triangles and other polygons
* Has difficulty identifying, describing, predicting and drawing transformations (including on a Cartesian plane)
* Rarely uses appropriate labels (including units) in diagrams
* Errors or omissions are major
 |

**Statistics and Probability** **In bold** are expectations to be met in all strands

|  |  |  |  |
| --- | --- | --- | --- |
| **4 - Exceeding** | **3 - Meeting** | **2 - Approaching** | **1 - Working Below** |
| * **Fluently uses precise mathematical language correctly**
* **Independently and consistently makes connections among concrete, pictorial and symbolic representations**
* **Independently considers and applies alternative strategies to solve a range of complex and unfamiliar problems**
* **Independently makes connections between and within the different strands of mathematics**
* Consistently selects appropriate strategies for collecting or finding data to answer questions or solve a wide range of problems
* Consistently organizes data in a format appropriate to a wide range of purposes and problems
* Includes precise labels in charts, tables and graphs
* Interprets data in a wide range of graphs appropriately
* Describes, makes predictions about and compares possible outcomes in a wide range of problem contexts
* Explains and distinguishes between experimental and theoretical probability for a wide range of contexts
* Consistently explains strategies and reasoning with clarity, precision, and thoroughness
* Few errors or omissions, and are minor
 | * **Routinely uses mathematical language correctly**
* **Makes connections among concrete, pictorial and symbolic representations**
* **Routinely selects and applies appropriate strategies to solve problems**
* **Makes connections between and within the different strands of mathematics**
* Routinely selects appropriate strategies for collecting or finding data to answer questions or solve problems
* Routinely organizes data in a format appropriate to purpose, and to solve problems
* Routinely includes appropriate labels in charts, tables and graphs
* Interprets data in graphs appropriately
* Routinely describes, makes predictions about and compares possible outcomes
* Explains and distinguishes between experimental and theoretical probability
* Routinely explains strategies and reasoning with clarity
* Errors or omissions are minor
 | * **Inconsistently uses correct mathematical language**
* **Sometimes makes connections among concrete, pictorial and symbolic representations**
* **Sometimes selects and applies appropriate strategies to solve problems**
* **Sometimes makes connections between and within the different strands of mathematics**
* Sometimes or with prompting selects appropriate strategies for collecting or finding data to answer questions or solve problems
* Sometimes or with prompting organizes data in a format appropriate to purpose, and to solve problems
* Sometimes or with prompting includes appropriate labels in charts, tables and graphs
* Sometimes interprets data in graphs appropriately
* Sometimes describes, makes predictions about and compares possible outcomes
* Sometimes explains and distinguishes between experimental and theoretical probability
* Sometimes explains strategies and reasoning, or explanations may be incomplete
* Errors or omissions may include some major
 | * **Rarely uses correct mathematical language**
* **Has difficulty making connections among concrete, pictorial and symbolic representations**
* **Rarely selects or applies appropriate strategies to solve problems**
* **Rarely makes connections between and within the different strands of mathematics**
* Has difficulty selecting appropriate strategies for collecting or finding data to answer questions or solve problems
* Has difficulty organizing data in a format appropriate to purpose, and solving problems
* Rarely includes labels in charts, tables and graphs
* Has difficulty interpreting data in graphs appropriately
* Has difficulty describing, making predictions about and comparing possible outcomes
* Has difficulty explaining and distinguishing between experimental and theoretical probability
* Has difficulty explaining strategies and reasoning
* Errors or omissions are major
 |