**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 |