| **Attribute's name** | **Definition** | **Key actions** |
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| A1. Recognize mathematical structures and patterns | Students can identify numerical properties, patterns, and structures. This includes recognizing patterns, logical organization, or trends, and making connections across various representations (such as tables, graphs, or expressions) to support conclusions. | 1. Identifies numerical patterns 2. Relates quantities 3. Identifies numerical information within tables and graphs. 4. Recognizes structure or order in numerical arrangements. |
| A2. Perform procedures | This consists of the ability to use algorithms, rules, or known mathematical formulas to solve exercises or problems. This process requires the student to correctly perform operations such as addition, subtraction, multiplication, division, measurement, unit conversion, or equation solving, without needing to justify the chosen procedure. For example, calculating the area of a rectangle using the corresponding formula. | 1. Correctly performs algorithms for addition, subtraction, multiplication, or division. 2. Uses known formulas (area, perimeter, unit conversion, etc.). 3. Calculates with fractions, decimals, percentages, or ratios. 4. Solves equations or equalities using known steps. 5. Makes operational estimations systematically. 6. Follows step-by-step instructions to solve an exercise. |
| A3. Formulate mathematical representations | This attribute refers to the ability to understand a real-life or verbal situation and express it using mathematics. Students identify important information, relate it to mathematical ideas, and choose how to represent it — using numbers, symbols, diagrams, or operations. It includes translating information from one form to another (like from text to an equation or from a graph to a fraction), writing down the correct operations, and recognizing relationships between quantities (such as double, half, or more than). | 1. Represents the meaning of the interpretation of a situation with numbers or graphics. 2. Translates information from one format to another (text to operation, graph to fraction, etc.). 3. Writes down the mathematical operation required from the context. 4. Poses relationships between quantities (e.g., double, half, more than) or mathematical expressions. |
| A4. Apply Strategic Mathematical Reasoning | The student selects and applies appropriate strategies to solve multi-step or non-routine problems by analyzing information, using analogies, and reasoning through known structures. This includes working backwards from results, visualizing and translating between different representations (verbal, symbolic, spatial), and making strategic decisions that demonstrate understanding beyond procedural knowledge. | 1. Performs mathematical procedures by analogy 2. Decides the strategy to solve a multi-step problem based on extracted information 3. Works backwards from the solution to find missing parameters. 4. Visualizes different representations in the plane or the space 5. Applies mathematical properties or theorems to particular cases (deductive reasoning) |