Standards for Mathematical Practices

Student: **Mathematical Topic(s):** **Date:**

1. Makes sense of problems and perseveres in solving them

- ☐ Understands the meaning of the problem and looks for entry points to its solution
- ☐ Analyzes information (givens, constrains, relationships, goals)
- ☐ Designs a plan
- ☐ Monitors and evaluates the progress and changes course as necessary
- ☐ Checks their answers to problems and ask, "Does this make sense?"

Comments:

2. Reason abstractly and quantitatively

- ☐ Makes sense of quantities and relationships
- ☐ Represents a problem symbolically
- ☐ Considers the units involved
- ☐ Understands and uses properties of operations

Comments:

4. Model with mathematics.

- ☐ Apply reasoning to create a plan or analyze a real world problem
- ☐ Applies formulas/equations
- ☐ Makes assumptions and approximations to make a problem simpler
- ☐ Checks to see if an answer makes sense and changes a model when necessary

Comments:

8. Look for and express regularity in repeated reasoning

- ☐ Notices repeated calculations and looks for general methods and shortcuts
- ☐ Continually evaluates the reasonableness of their results while attending to details and makes generalizations based on findings
- ☐ Solves problems arising in everyday life

Comments:

3. Construct viable arguments and critique the reasoning of others

- ☐ Uses definitions and previously established causes/effects (results) in constructing arguments
- ☐ Makes conjectures and attempts to prove or disprove through examples and counterexamples
- ☐ Communicates and defends their mathematical reasoning using objects, drawings, diagrams, actions
- ☐ Listens or reads the arguments of others
- ☐ Decide if the arguments of others make sense
- ☐ Ask useful questions to clarify or improve the arguments

Comments:

5. Use appropriate tools strategically.

- ☐ Identifies relevant external math resources (digital content on a website) and uses them to pose or solve problems
- ☐ Makes sound decisions about the use of specific tools. Examples may include:
  - ☐ Calculator
  - ☐ Concrete models
  - ☐ Digital Technology
  - ☐ Pencil/paper
  - ☐ Ruler, compass, protractor
- ☐ Uses technological tools to explore and deepen understanding of concepts

Comments:

7. Look for and make use of structure.

- ☐ Looks for patterns or structure
- ☐ Recognize the significance in concepts and models and can apply strategies for solving related problems
- ☐ Looks for the big picture or overview

Comments:

6. Attend to precision.

- ☐ Communicates precisely using clear definitions
- ☐ States the meaning of symbols, calculates accurately and efficiently
- ☐ Provides carefully formulated explanations
- ☐ Labels accurately when measuring and graphing

Comments: