**My Standards for Mathematical Practice**

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| **Student Observable Behaviors** |
| **1. Make sense of problems and persevere in solving them (problem solving)** |  |
| 1. Working and reading rich problems carefully
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| 1. Drawing pictures, diagrams, tables, or using objects to make sense of the problem
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| 1. Discussing the meaning of the problem with team members
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| 1. Making choices about which solution path to take
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| 1. Trying out potential solution paths and making changes as needed
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| 1. Checking answers and making sure solutions are reasonable and make sense
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| 1. Explaining other ways to solve the problem
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| 1. Persisting in efforts to solve the to solve challenging problems, even after reaching a point of frustration
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| **2. Reason abstractly and quantitatively (reasoning)** |  |
| 1. Using mathematical symbols to represent situations
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| 1. Taking quantities out of context in situations (deconstructing)
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| 1. Putting quantities back in context to see if they make sense (contextualizing)
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| 1. Considering units when determining if the answer makes sense in terms of the situation
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| **3. Construct viable arguments and critique the reasoning of others (proof)** |  |
| 1. Making and testing conjectures
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| 1. Explaining and justifying their thinking using words, objects, and drawings
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| 1. Listening to the ideas of others and deciding if they make sense
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| 1. Asking useful questions
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| 1. Identifying flaws in logic when responding to the arguments of others
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| 1. Elaborating with a second sentence (spontaneously or prompted by the teacher or another student) to explain their thinking and connect it to their first sentence
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| 1. Talking about and asking questions about each other’s thinking, in order to clarify or improve their own mathematical understanding
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| 1. Revising their work based on the justification and explanations of others
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| **4. Model with mathematics (representations)** |  |
| 1. Using mathematical models (i.e., formulas, equations, symbols) to solve problems in the world
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| 1. Using appropriate tools such as objects, drawings, and tables to create mathematical models
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| 1. Making connections between different mathematical representations (concrete, verbal, algebraic, numerical, graphical, pictorial, etc.)
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| 1. Checking to see if an answer makes sense within the context of a situation and changing the model as needed
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**Standards for Mathematical Practice**

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| **Student Observable Behaviors** |
| **5. Use appropriate tools strategically (justifying)** |  |
| * 1. Using technological tools to explore and deepen understanding of concepts
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| * 1. Deciding which tool will best help solve the problem. Examples may include
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| 1. Calculator
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| 1. Concrete model
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| 1. Digital Technology
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| 1. Pencil/paper
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| 1. Ruler, compass, protractor
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| * 1. Estimating solutions before using a tool
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| * 1. Comparing estimates to solutions to see if the tool was effective
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| **6. Attend to precision (accuracy)** |  |
| * 1. Communicating precisely using clear language and accurate mathematical vocabulary
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| * 1. Deciding when to estimate or give a precise answer
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| * 1. Calculating accurately and efficiently, expressing answers with an appropriate degree of precision
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| * 1. Using appropriate units; appropriately labeling diagrams and graphs
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| **7. Look for and make use of structure (thinking)** |  |
| 1. Finding structure and patterns in numbers
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| 1. Finding structure and patterns in diagrams and graphs
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| 1. Using patterns to make rules about math
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| 1. Using these math rules to help them solve problems
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| **8. Look for and express regularity in repeated reasoning. (connections)** |  |
| 1. Looking for patterns when working with numbers, diagrams, tables, and graphs
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| 1. Observing when patterns are repeated
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| 1. Using observations from repeated calculations to take shortcuts
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| **Summary:** |