Standards for Mathematical Practice

Mathematically Proficient Students can………

1. **Make sense of problems and persevere in solving them**
    - *-doing mathematics means solving problems and discussing how they solved them*
    - *-plan a solution pathway and adjust as needed as they work through the problem*
    - *-persevere (" First, I drew a diagram, and it didn't help, so I tried to make a table. That worked much better because I found a pattern.")*
    - *-explain thinking through equations, verbal descriptions, tables, graphs, diagrams and search for trends in data*

2. **Reason abstractly and quantitatively**
    - *-numbers represent quantities and these quantities can be represented with symbols*
    - *-generalize based on what they observe*
    - *-"I know that rectangles are parallelograms with four right angles ….so that means this square must be a rectangle because . . ."*

3. **Construct viable arguments and critique the reasoning of others**
    - *-make conjectures with support and reason through the use of objects, drawings, diagrams and actions*
    - *-ask and respond to questions like, "How did you get that?" and "Why is that true?"*

4. **Model with mathematics**
    - *-put mathematics in the context of real world situations and identify those relationships*
    - *-use organizational strategies such as making a table, creating a number line, drawing diagrams, use objects, etc.*

5. **Use appropriate tools strategically**
    - *-use familiar, grade appropriate tools and know when they can be helpful*
    - *-recognize both the strengths and limitations of the tool being used*

6. **Attend to precision**
    - *-communicate precisely to others through my language, models and representations*
    - *-calculate accurately and efficiently, and show flexibility with strategies*

7. **Look for and make use of structure**
    - *-look closely at patterns and structure*
    - *-identify and understand the make-up and inclusion of number (commutative and distributive properties)*

8. **Look for and express regularity in repeating reasoning**
    - *-continually evaluate the reasonableness of intermediate results ("I notice when I divide 4 by 11, I get 0.36, then I keep dividing the same numbers over and over.")*
    - *-students continually check their work by asking themselves, "Does this make sense?"*