Standards for Mathematical Practice

Standards for Mathematical Practice (SMPs)

These standards describe varieties of expertise that mathematics educators seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education.

1. Making sense of problems and persevere in solving them.
    a. Student reads and rereads instructions to deeply understand each task.
    b. Student completes all work.
    c. Student consistently re-assesses skills for mastery, never giving up.
    d. If assessment is not mastered, student attends tutoring or otherwise seeks help.
    e. Student asks clarifying questions in class.

2. Reasoning abstractly and quantitatively.
    a. Student draws representation of problems.
    b. Student organizes their thoughts and information through notes, highlights, and drawings.

3. Constructing viable arguments and critiquing the reasoning of others.
    a. Student consistently uses academic language, to critique the reasoning of others.
    b. Student thoughtfully and actively contributes to team discussions.

4. Modeling with mathematics.
    a. Student solves real-world problems.
    b. Student organizes their data for given problems.

5. Using appropriate tools strategically.
    a. Student uses correct tools for the task.
    b. Student tracks their learning and practice using an organized binder and logs.

6. Attending to precision.
    a. Student accurately rounds numbers.
    b. Student definitions are clear.
    c. Student uses correct units of measure in their answers.
    d. Student uses correct symbols.
    e. Student clearly describes and labels problems.

7. Looking for and making use of structure.
    a. Students use simpler problems to help solve complex problems.
    b. Students use prior knowledge of vocabulary and concepts to solve new problems.
    c. Students use academic language to make connections.

8. Looking for and expressing regularity in repeated reasoning.
    a. Students use patterns to make predictions.
    b. Students can recognize and apply a general pattern to specific situation.
    c. Students can apply the correct formula to solve a problem.
    d. Students create equations from a given pattern.