

SUMMARY OF STANDARDS FOR MATHEMATICAL PRACTICE

1. **Make sense of problems and persevere in solving them.**

- Find meaning in problems
- Analyze, predict and plan solution pathways
- Verify answers
- Students ask themselves the question: "Does this make sense?"

2. **Reason abstractly and quantitatively.**

- Make sense of quantities and their relationships in problems
- Create coherent representations of problems

3. **Construct viable arguments and critique the reasoning of others.**

- Understand and use information to construct arguments
- Make and explore the truth of conjectures
- Justify conclusions and respond to arguments of others

4. **Model with mathematics.**

- Apply mathematics to problems in everyday life
- Identify quantities in a practical situation
- Interpret results in the context of the situation and reflect on whether the results make sense

5. **Use appropriate tools strategically.**

- Consider the available tools when solving problems
- Are familiar with tools appropriate for their grade or course (pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer programs, digital content located on a website, and other technological tools)

6. **Be precise.**

- Communicate precisely to others
- Use clear definitions, state the meaning of symbols and are careful about specifying units of measure and labeling axes
- Calculate accurately and efficiently

7. **Look for and make use of structure.**

- Discern patterns and structures
- Can step back for an overview and shift perspective
- See complicated things as single objects or as being composed of several objects

8. **Look for and identify ways to create shortcuts when doing problems.**

- When calculations are repeated, look for general methods, patterns and shortcuts
- Be able to evaluate whether an answer makes sense