

When mathematicians read, they:

- Seek understanding and accuracy
- Use information to piece together a solution
- Look for patterns and relationships to make connections
- Seek to understand meaning of
 - *Symbol*
 - *Equation*
 - *Situation*
 - *Problem*
- Ask questions
- Reread for clarity and reasonability
- Apply mathematical reasoning
- Consider vocabulary, language and word parts that carry meaning



When mathematicians think, they:

- Consider patterns
- Make sense of task and formulate plan for solving
- Apply previous learning to new situations or problems
- Estimate and generalize to check reasonability
- Persevere in solving problems
- Analyze thinking and processes of self and others
- Determine relevance of given information



When mathematicians communicate, they:

- Justify thinking and reasoning
- Construct viable arguments
- Use equations, drawings, tables, graphs, symbols, numbers and/or words
- Explain thinking with precision in writing and speaking
- Use precise vocabulary
- Include reasons and examples
- Connect to real-world situations and examples



When mathematicians collaborate, they:

- Question, analyze and respond to the processes and/or reasoning of others
- Learn from the expertise of others
- Discuss and eliminate unreasonable solutions
- Use teamwork to persevere through challenges
- Value various methods of problem solving
- Notice and discuss connections among problem solving strategies

