

Math Practice Standards – Essentials

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

Students have opportunity to:

- make sense of the problem for themselves
- try out sensible ideas
- consider similar problems
- consider special cases
- represent ideas verbally and through symbols, pictures, and diagrams
- make connections among representations

2) Reason abstractly and quantitatively.

Students have opportunity to:

- use symbols to represent mathematical ideas
- explain what the symbols mean and how they help the problem solving

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

Students have opportunity to:

- use assumptions, accepted understandings, and results to make mathematical arguments.
- communicate findings to others
- compare arguments for effective reasoning
- construct arguments using words, objects, drawings, diagrams, and actions
- ask useful questions

4) Model with mathematics.

Students have opportunity to:

- use math to solve real world problems.
- describe real world situations mathematically
- identify the numbers and measures that matter to the problem solving
- make sure results make sense to the original problem

5) Use appropriate tools strategically.

Students have opportunity to:

- choose appropriate tools to solve problems
- use tools to deepen understanding

6) Attend to precision.

Students have opportunity to:

- show their mathematical thinking with clear and precise language and representation
- check their own assumptions and results

7) Look for and make use of structure.

Students have opportunity to:

- search for patterns
- apply common mathematical ideas and definitions
- shift perspective

8) Look for and express regularity in repeated reasoning.

Students have opportunity to:

- notice if calculations or steps repeat themselves
- find general methods or shortcuts
- check for the reasonableness of their results