

Mathematical Practices & Student Look Fors

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

- ☐ Analyze information (givens, constraints, relationships).
- ☐ Make conjectures and plan a solution pathway.
- ☐ Use objects, drawings, and diagrams to solve problems.
- ☐ Monitor progress and change course as necessary.
- ☐ Check answers to problems and ask, "Does this make sense?"

2. Reason abstractly and quantitatively.

- ☐ Make sense of quantities and relationships in problem situations.
- ☐ Create a coherent representation of a problem.
- ☐ Translate from contextualized to generalized or vice versa.
- ☐ Flexibly use properties of operations.

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

- ☐ Make conjectures and use counterexamples to build a logical progression of statements to support ideas.
- ☐ Use definitions and previously established results.
- ☐ Listen to or read the arguments of others.
- ☐ Ask probing questions to other students.

4. Model with mathematics.

- ☐ Determine equation that represents a situation.
- ☐ Illustrate mathematical relationships using diagrams, two-way tables, graphs, flowcharts, and formulas.
- ☐ Check to see whether an answer makes sense within the context of a situation and change a model when necessary.

Mathematical Practices & Student Look Fors

5. Use appropriate tools strategically.

- ☐ Choose tools that are appropriate for the task (e.g., manipulative, calculator, digital technology, ruler).
- ☐ Use technological tools to visualize the results of assumptions, explore consequences, and compare predictions with data.
- ☐ Identify relevant external math resources (digital content on a website) and use them to pose or solve problems.

6. Attend to precision.

- ☐ Communicate precisely, using appropriate terminology.
- ☐ Specify units of measure and provide accurate labels on graphs.
- ☐ Express numerical answers with appropriate degree of precision.
- ☐ Provide carefully formulated explanations.

7. Look for and make use of structure.

- ☐ Notice patterns or structure, recognizing that quantities can be represented in different ways.
- ☐ Use knowledge of properties to efficiently solve problems.
- ☐ View complicated quantities both as single objects and as compositions of several objects.

8. Look for and express regularity in repeated reasoning.

- ☐ Notice repeated calculations and look for general methods and shortcuts.
- ☐ Maintain oversight of the process while attending to the details.
- ☐ Evaluate reasonableness of intermediate and final results.



Mathematical Practices & Student Look Fors

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

- ☐ Analyze information (givens, constraints, relationships).
- ☐ Make conjectures and plan a solution pathway.
- ☐ Use objects, drawings, and diagrams to solve problems.
- ☐ Monitor progress and change course as necessary.
- ☐ Check answers to problems and ask, "Does this make sense?"

2. Reason abstractly and quantitatively.

- ☐ Make sense of quantities and relationships in problem situations.
- ☐ Create a coherent representation of a problem.
- ☐ Translate from contextualized to generalized or vice versa.
- ☐ Flexibly use properties of operations.

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

- ☐ Make conjectures and use counterexamples to build a logical progression of statements to support ideas.
- ☐ Use definitions and previously established results.
- ☐ Listen to or read the arguments of others.
- ☐ Ask probing questions to other students.

4. Model with mathematics.

- ☐ Determine equation that represents a situation.
- ☐ Illustrate mathematical relationships using diagrams, two-way tables, graphs, flowcharts, and formulas.
- ☐ Check to see whether an answer makes sense within the context of a situation and change a model when necessary.

Mathematical Practices & Student Look Fors

5. Use appropriate tools strategically.

- ☐ Choose tools that are appropriate for the task (e.g., manipulative, calculator, digital technology, ruler).
- ☐ Use technological tools to visualize the results of assumptions, explore consequences, and compare predictions with data.
- ☐ Identify relevant external math resources (digital content on a website) and use them to pose or solve problems.

6. Attend to precision.

- ☐ Communicate precisely, using appropriate terminology.
- ☐ Specify units of measure and provide accurate labels on graphs.
- ☐ Express numerical answers with appropriate degree of precision.
- ☐ Provide carefully formulated explanations.

7. Look for and make use of structure.

- ☐ Notice patterns or structure, recognizing that quantities can be represented in different ways.
- ☐ Use knowledge of properties to efficiently solve problems.
- ☐ View complicated quantities both as single objects and as compositions of several objects.

8. Look for and express regularity in repeated reasoning.

- ☐ Notice repeated calculations and look for general methods and shortcuts.
- ☐ Maintain oversight of the process while attending to the details.
- ☐ Evaluate reasonableness of intermediate and final results.

