

# The Standards for Mathematical Practice

Grades K-12

| Mathematically proficient students...  | <i>Which means that your child will...</i>  |
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| <p><b>1</b><br/>Make sense of problems and persevere in solving them.</p>            | <ul style="list-style-type: none"> <li>• Take time to read and think carefully about a problem</li> <li>• Work hard even when challenged</li> <li>• Work on complex tasks with peers</li> <li>• Build stamina for mathematics</li> <li>• Try different strategies</li> <li>• Be motivated to tackle challenges</li> </ul>             |
| <p><b>2</b><br/>Reason abstractly and quantitatively.</p>                            | <ul style="list-style-type: none"> <li>• Understand and use the contextual situation of a problem</li> <li>• Identify needed quantities in a problem and use them to compute</li> <li>• Explain what a solution means in the context of the problem</li> <li>• Label quantities appropriately</li> </ul>                              |
| <p><b>3</b><br/>Construct viable arguments and critique the reasoning of others.</p> | <ul style="list-style-type: none"> <li>• Justify methods and solutions with clarity</li> <li>• Speak and write about mathematics</li> <li>• Form a logical argument as proof</li> <li>• Discuss mathematical ideas with others</li> <li>• Listen actively to classmates' thinking and analyze the validity of their claims</li> </ul> |
| <p><b>4</b><br/>Model with mathematics.</p>  | <ul style="list-style-type: none"> <li>• Use models such as graphs, drawings, tables, symbols, and diagrams to solve problems</li> <li>• Solve real-world problems using mathematics</li> </ul>   |
| <p><b>5</b><br/>Use appropriate tools strategically.</p>                             | <ul style="list-style-type: none"> <li>• Estimate an answer before using a tool</li> <li>• Select the right tool for the job</li> <li>• Tools include paper-and-pencil algorithms and formulas</li> </ul>   |
| <p><b>6</b><br/>Attend to precision.</p>   | <ul style="list-style-type: none"> <li>• Use correct mathematical vocabulary and symbols</li> <li>• Assess the reasonableness of answers</li> <li>• Decide whether an estimate or an exact answer is needed</li> </ul>  |
| <p><b>7</b><br/>Look for and make use of structure.</p>                              | <ul style="list-style-type: none"> <li>• Notice, continue, and create patterns</li> <li>• Use patterns to solve problems</li> </ul>   |
| <p><b>8</b><br/>Look for and express regularity in repeated reasoning.</p>           | <ul style="list-style-type: none"> <li>• Notice patterns in calculations to create and explain rules and shortcuts</li> <li>• Generalize rules and properties of number to more easily solve problems</li> </ul>  |