

# Mathematics Problem Solving Scoring Guide: Plain Language Student Version

(Unofficial: to be used as a support for students as they learn to use the official scoring guide)

| Process Dimensions   | **6/5   | 4   | 3   | *2/1   |
|--|---|---|---|--|
| <p><b>Making Sense of the Task</b><br/><i>Understand the ideas and change them into mathematics</i><br/><b>WHAT?</b></p>   | <ul style="list-style-type: none"> <li>The problem is changed into thoroughly developed ideas that work.</li> <li>The ideas are connected to other math ideas.</li> </ul>   | <ul style="list-style-type: none"> <li>The problem is changed into a math task with ideas that can work.</li> </ul>   | <ul style="list-style-type: none"> <li>Parts of the problem are changed into a math with ideas that can work.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Only parts of the problem are understood.</li> </ul>   | <ul style="list-style-type: none"> <li>Only a small portion of the problem is understood.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>No understanding is shown.</li> </ul>   |
| <p><b>Representing and Solving the Task</b><br/><i>Choose the plan that works best for this problem. Use pictures, charts, words, graphs and/or numbers.</i><br/><b>HOW?</b></p> | <ul style="list-style-type: none"> <li>A thoroughly developed plan is used.</li> <li>The plan uses advanced math.</li> <li>The plan is connected to other math ideas.</li> </ul>  | <ul style="list-style-type: none"> <li>The plan is complete and works.</li> </ul>   | <ul style="list-style-type: none"> <li>The plan could solve some parts of the problem.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The plan has a few missing parts.</li> </ul> <p><b>High School Essential Skills ONLY:</b></p> <ul style="list-style-type: none"> <li>The plan does not use High School level math.</li> </ul> | <ul style="list-style-type: none"> <li>The plan has many missing parts.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The plan cannot work.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>No work is shown.</li> </ul>                                   |
| <p><b>Communicating Reasoning</b><br/><i>Use the language of math (words, equations, graphs, charts) to make your ideas clear to others.</i><br/><b>WHY?</b></p>                 | <ul style="list-style-type: none"> <li>The path through the work is very clear.</li> <li>An explanation connecting each of the parts is given using precise mathematical language.</li> <li>All parts are labeled and identified.</li> </ul>                        | <ul style="list-style-type: none"> <li>The path through the work is clear.</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>The work leads to a clearly identified answer.</li> <li>Math words and symbols are used.</li> </ul>                                      | <ul style="list-style-type: none"> <li>The path is not clear or the math words and symbols do not make sense.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The path leaves out important parts of the work.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The answer is not identified.</li> </ul>           | <ul style="list-style-type: none"> <li>The path to complete the work is just started.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The parts do not connect to each other.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>No steps are shown.</li> </ul> |
| <p><b>Accuracy</b><br/><i>The answer is...</i><br/><b>IS IT RIGHT?</b></p>   | <ul style="list-style-type: none"> <li>The answer is correct.</li> <li>The outcome extends beyond the question asked.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The outcome connects to a related math idea or question.</li> </ul>        | <ul style="list-style-type: none"> <li>The answer given is correct.</li> <li>The answer matches the work.</li> <li>The solution answers the question asked.</li> </ul>  | <ul style="list-style-type: none"> <li>The correct answer is given but the work may have a small error.</li> <li>The answer is wrong due to a small error.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The work leading to an answer is correct but is not finished.</li> </ul>  | <ul style="list-style-type: none"> <li>The answer given is not correct.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The answer given does not match the work.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>No answer is given.</li> </ul>             |
| <p><b>Reflecting and Evaluating</b><br/><i>State and check your answer, and explain why it makes sense.</i><br/><b>CHECK?</b></p>  | <ul style="list-style-type: none"> <li>The problem is solved a second time using a different method.</li> <li>Different methods used are compared to each other.</li> <li>Evidence is provided that explores other possible answers and interpretations.</li> </ul> | <ul style="list-style-type: none"> <li>The answer is written in a complete sentence and answers the question that was asked.</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>All of the work has been double-checked to show why the answer makes sense.</li> </ul> | <ul style="list-style-type: none"> <li>The answer is not written in a complete sentence or does not answer the question that was asked.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Some, but not all of the work is checked.</li> </ul>   | <ul style="list-style-type: none"> <li>The check does not work.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The check is barely started.</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>The check is not there at all.</li> </ul>                       |

\*\*6 for a given dimension would have most of the list; 5 would have some of the list.

\*2 for a given dimension would be inadequate in some of the list; while a 1 would be inadequate in most of the list.