

# GEPPS and Check

| G.E.P.P.S.  | Definitions  | Common Problem Solving Strategies Imbedded in <u>G.E.P.P.S.</u>   |
|---|--|---|
| G   | <p><b>Givens: Important Numbers and Words</b><br/>           The givens are evident in the problem and provide the information needed to solve the problem. Use the givens to consolidate a lengthy problem. Omit unnecessary or irrelevant information.<br/> <b>Determine what the question is asking.</b></p>            | <ul style="list-style-type: none"> <li>-Find important information</li> <li>-Omit unnecessary information</li> <li>-Determine what the question is asking.</li> </ul>                                       |
| E   | <p><b>Explanation: The Plan</b><br/>           Explain the steps taken to arrive at the answer to the problem. List detailed steps to prove that the answer is correct.<br/>           This is the <b>HOW</b> and the <b>WHAT</b> of the plan of action. This is where the <b>mathematical reasoning</b> is explained.</p> | <ul style="list-style-type: none"> <li>-Develop a plan of action.</li> <li>-Record steps to carry out the plan.</li> <li>-Work backwards</li> <li>-Solve a Similar problem</li> <li>-Make a list</li> </ul> |
| P   | <p><b>Pattern: The Pattern leads to the Answer.</b> Math is based on patterns and relationships among numbers.<br/>           The pattern may or may not be obvious. In any case, look for the relationships or <b>mathematical connections</b> among the numbers involved in the problem.</p>                             | <ul style="list-style-type: none"> <li>-Look for a pattern</li> <li>-Look for connections: Less/more, before/after, growing, repeating, mathematical properties, etc...</li> </ul>                          |
| P   | <p><b>Picture: Make Visual Representations.</b><br/>           Organize the data.<br/>           Draw a picture, diagram, chart, table, graph, map, etc...<br/>           Organize the information/data from the problem graphically.<br/>           Patterns may be imbedded in the picture.</p>                          | <ul style="list-style-type: none"> <li>-Create a graphic representation</li> <li>- Draw a picture, diagram, chart, table, graph, map</li> </ul>   |
| S   | <p><b>Solution: The Answer</b><br/>           Indicate the answer to the problem. Do not leave the reader to look for the answer among supporting information. The answer should be explicitly identified.</p>   | <ul style="list-style-type: none"> <li>-Solution is explicitly identified.</li> </ul>   |
|  | <p><b>Check: Review</b><br/>           Examine the completed work carefully.<br/>           Thoroughly check for mistakes.<br/>           Reflect on the mathematical reasoning of the answer.<br/>           Reflect with partners or groups.<br/>           Re-work the problem as necessary.</p>                        | <ul style="list-style-type: none"> <li>-Work backwards</li> <li>-Check for errors</li> <li>-Reflection</li> </ul>   |