KATE ver. 2.0 - Scoring problems 10 – 16

* Problems 10 – 15 exist as coupled pairs of questions based on a sample middle grade student problem and solution.
* The first question of the pair asks, “Is the answer correct?” and is used to give the PST the opportunity to judge the correctness of the middle grade student’s response. **The PST should receive a score of “1” if they properly ascertain the correctness of the MGS’ response otherwise they should receive a grade of “0”.**
* The second question asks the PST, “If you think the student has misconceptions with respect to the problem, how would you assist this student?” and is used to give the PST an opportunity to explain a strategy they might use to help the MGS. **The PST should receive a score of “0”, “1” or “2” based on the following rubric:**

0 - No response, completely incorrect, irrelevant or incoherent.

1 - The response provides a partial or incomplete description of strategies for addressing students‘ misconceptions. However, the strategies reveal factual or procedural nature, and entail some conceptual nature.

2 - The response provides a complete description of strategies for addressing students‘ misconceptions. Furthermore, the response entails accurate and complete conceptual strategies.

* **Problem 16** should be scored based on a different rubric. **The PST should receive a score of “0”, “1”, “2” or “3” based on the following rubric:**

| **Objective/Criteria** | **Performance Indicators** |  |  |  | **Points** |
| --- | --- | --- | --- | --- | --- |
|  | **3 points** | **2 points** | **1 point** | **0 points** |  |
| **Mathematical understanding of the problem** | Evidence of understanding the problem and underlying mathematics concepts; correct use of data and information related to real world (pre-service teacher addresses the “correctness” of Jaquan’s response) | Some gaps in understanding the relevant mathematical knowledge that could lead to a solution. (pre-service teacher tries but does not adequately address Jaquan’s response or only partially addresses the “correctness” of Jaquan’s response) | Significant gaps or lack of understanding of the conditions of the problem or underlying mathematics concepts; major errors in use of data and information (pre-service teacher does not solve problem or solves it incorrectly and does not properly address the “correctness” of Jaquan’s response) | Complete lack of understanding the problem. (pre-service teacher solves problem incorrectly or not at all and improperly addresses the “correctness” of Jaquan’s response or does not address it at all) |  |
| **Problem solving strategies** | Correct use of process and mathematical ideas that could lead to a solution (pre-service teacher uses correct problem solving strategy (i.e system of two equations, substitution, etc.) | Uses guess and check, or a strategy that might work, but only for a particular problem. | Unworkable approach or lack of direction and reason (pre-service teacher uses an incorrect problem solving strategy) | Not present (no problem solving strategy is present) |  |
| **Clarity in the solution process of the problem** | Uses clear and correct written and mathematical language and symbols  effectively and accurately explains reasons for solution attempts and approaches | Presentation is not completely clear; word descriptions or mathematical language (diagrams) are not always easy to read or understand. Unclear explanation of attempts or reasoning | Unclear, confusing explanation of attempts or solutions (whether there is a correct answer or not); difficult to follow line of thinking using either mathematical language or words describing the solution process | No explanation or presentation |  |
| **Completeness of the problem** | Presentation is complete; all necessary steps present (whether correct or not). | Some key missing steps in the solution or incomplete reasoning. | Significant important steps missing. Only the answer is given. | No indication of the steps that led to the solution. |  |
| **Total** |  |  |  |  |  |