STANDARDS FOR MATHEMATICAL PRACTICE

SMP	NEEDS IMPROVEMENT	EMERGING	PROFICIENT	EXEMPLARY
1. MAKES SENSE OF PROBLEMS AND PERSERVER IN SOLVING THEM	**Task:** □ Is strictly procedural. □ Does not require students to check solutions for errors. **Teacher:** □ Does not allow for wait time; asks leading questions to rush through task. □ Does not encourage students to individually process the tasks. □ Is focused solely on answers rather than processes and reasoning.	**Task:** □ Is overly scaffolded or procedurally "obvious". □ Requires students to check answers by plugging in numbers. **Teacher:** □ Allots too much or too little time to complete task. □ Encourages students to individually complete tasks, but does not ask them to evaluate the processes used. □ Explains the reasons behind procedural steps. □ Does not check errors publicly.	**Task:** □ Is cognitively demanding. □ Has more than one entry point. □ Requires a balance of procedural fluency and conceptual understanding. □ Requires students to check solutions for errors using one other solution path. **Teacher:** □ Allows ample time for all students to struggle with task. □ Expects students to evaluate processes implicitly. □ Models making sense of the task (given situation) and the proposed solution.	**Task:** □ Allows for multiple entry points and solution paths. □ Requires students to defend and justify their solution by comparing multiply solution paths. **Teacher:** □ Differentiates to keep advanced students challenged during work time. □ Integrates time for explicit meta-cognition. □ Expects students to make sense of the task and the proposed solution.
3. CONSTRUCT VIABLE ARGUMENT	**Task:** □ Is either ambiguously stated. **Teacher:** □ Does not ask students to present arguments or solutions. □ Expects students to follow a given solution path without opportunities to make conjectures.	**Task:** □ Is not at the appropriate level. **Teacher:** □ Does not help students differentiate between assumptions and logical conjectures. □ Asks students to present arguments but not to evaluate them. □ Allows students to make conjectures without justification.	**Task:** □ Avoids single steps or routine algorithms. **Teacher:** □ Identifies students' assumptions. □ Models evaluation of student arguments. □ Asks students to explain their conjectures.	**Teacher:** □ Helps students differentiate between assumptions and logical conjectures. □ Prompts students to evaluate peer arguments. □ Expects students to formally justify the validity of their conjectures.
6. ATTEND TO PRECISION	**Task:** □ Gives imprecise instructions. **Teacher:** □ Does not intervene when students are being imprecise. □ Does not point out instances when students fail to address the question completely or directly.	**Task:** □ Has overly detailed or wordy instructions. **Teacher:** □ Inconsistently intervenes when students are imprecise. □ Identifies incomplete responses but does not require student to formulate further response.	**Task:** □ Has precise instructions. **Teacher:** □ Consistently demands precision in communication and in mathematical solutions. □ Identifies incomplete responses and asks student to revise their response.	**Task:** □ Includes assessment criteria for communication of ideas. **Teacher:** □ Demands and models precision in communication and in mathematical solutions. □ Encourages students to identify when others are not addressing the question completely.

TEACHER:_____   **DATE:**_____

NOTES:

Adapted from *Institute for Advanced Study/Park City Mathematics Institute*