



## Thinking Protocol for Uncovering Student Thinking

### Teacher Preparation for the Thinking Protocol

- Choose a task that addresses content you are working on in class. Make a paper copy of the problem for each student with the Step 1 questions listed.
  - What is the math content in the problem? What math practices could be highlighted? How does it connect to what students are learning in class?
  - Consider how children will interact with the technology. Will the teacher project the item or will students have access to the item on a computer/iPAD/etc.?
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### MC<sup>2</sup> Thinking Protocol Steps (15-20 min.)

1. **Students think individually about a task and the three questions below using one color writing utensil. (3 min)**
    - ✓ What do I know about the problem?
    - ✓ What questions do I have?
    - ✓ Explain my reasoning or thinking in solving the problem.
  2. **Think with a partner about the task. Add to the solution in a different color. Don't erase any of your original ideas. (5 min.)**
    - ✓ Discuss your thinking about your responses to the questions with your partner. Make sure both partners have a chance to share. You may add to or change your response/thinking using a different color.
  3. **Share strategies for solving the task as a whole group. (6 min.)**
    - ✓ Teacher selects 2-3 students or partners to share their ideas. The purpose is to add new ideas/strategies to the whole group's thinking.
  4. **Ask students to reflect on the task and identify what was easy/hard about the problem. (1 min.)**
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### Teacher Reflection on the MC<sup>2</sup> Thinking Protocol

- In your PLC, discuss what data this process/task provides.
- Consider what instructional strategies are needed to support students' development of mathematical practices and flexibility in problem solving
- How can we use the protocol to build math confidence in students?
- How are the *Common Core Content and Math Practice Standards* advanced using the MC<sup>2</sup> Thinking Protocol with classroom warm-up problems?