Three Lenses for Analyzing Argumentation Tasks

As you select and modify tasks with an eye to mathematical argumentation, it can be helpful to consider the following three guiding questions (bolded). We offer these as "lenses" to use to support your analysis of the tasks, and subsequent revisions, as you deem appropriate.

1. **Does the task <u>engage</u> students in mathematical argumentation?**
   a. Does the task promote a mathematical discourse?
   b. Does the task prompt students to articulate a chain of reasoning?
   c. Does the task require students to write or otherwise record their chain or reasoning to show the result is true?

2. **What do you want the <u>students to learn</u> from the mathematical argumentation task?**
   a. Does the task help students produce better arguments?
   b. Does the task help students develop conceptual understanding?
   c. Does the task help students interpret solutions to problems?
   d. Does the task help students understand multiple representations of mathematics?

3. **What do you plan to <u>learn about your students</u> by using the mathematical argumentation task?**
   a. Does the task help you learn about students' prior knowledge about a topic?
   b. Does the task help you learn about students' ability to apply or connect their knowledge of one or more topics from a lesson, unit or course?
   c. Does the task help you learn about students' degree of mastery of the skills or concepts?
   d. Does the task help you learn about students' ability to communicate their reasoning effectively and to make clear connections among their claims, warrants and evidence?

<u>Note</u>: Asking students to generate a written argument for an assessment task is *not* the same as to prompting students to engage in the *practice of argumentation* for the purpose of learning. These are related, but distinct activities.