Commentary on Student Work

There are two types of work samples: 1) in-class work paper and 2) a homework paper. The papers pulled focus on two things:

1. The in-class paper will be used to discuss instructional strategies, and
2. The post-assessment paper shows an alternate approach.

1. One of the teachers who pilot tested this lesson offered the following comment:

   "My students enjoyed the assignment but thought it was difficult. It was hard to describe the rules. They could figure out what happened if they could show me, but it was very difficult for them to describe it as a rule….

   The written materials were not as rewarding as the experience during the lesson."

   It is clear that paper A shows some level of understanding, but it is hard to be sure if the student could apply his/her understanding to a different situation. This is the dilemma that many teachers face on an almost daily basis; that is, some students have difficulty communicating what they know or have limited ability to communicate mathematically. Provide time and opportunities for students to communicate in verbal and written form.

   Create opportunities for students to communicate about their mathematical thinking by asking questions when they do not understand. Allow students to share conjectures and rationale related to new understanding while not forgetting to compare and contrast different methods of the solution. Communications are very important for students to make connections about mathematics which is vital for understanding. It is no longer sufficient for teachers to make connections for students. They need to be encouraged to make their own connections to previous understandings and similar situations.

2. The post-assessment for paper B required students to describe four different compositions that would result in S′T′U′V′. This teacher adjusted the assessment to meet his or her needs it appears. The adjustment required more and deeper thought from the student because in order to complete the task they had to consider the situation differently multiple times. Perhaps the student response would have been richer if they were given feedback and provided an opportunity to revise their work.

3. Some may think that assessments should always be designed for students to demonstrate what they know in a single opportunity; however, sometimes directions are unclear or students interpret the expectations differently than teachers. Whatever the case, assessments should sometimes be treated as additional learning opportunities.