

A TEACHER REFLECTS



Evaluating Mathematical Arguments

In Lesson 9, I asked students to explain in words what the terms “consecutive” and “integers” meant. This was beneficial to students who can see math but not necessarily read and understand the terms. Suddenly, they had a more concrete understanding of what the problem was asking them to do. Many students opted to use large consecutive numbers and then made mathematical errors. I provided limitations and had students use three numbers below 30. Stanley was one of the first students to explain the “3” rule to his tablemates. Here is the way he explained it: “If you want to know if a number is divisible by 3, add up the digits. Look at 156. Add the $1 + 5 + 6$ and you get 12 and 12 is divisible by 3, so 156 is too!” From this, students were able to conclude that there were no sets of three consecutive numbers that, when added together, would not be divisible by 3.

For Lesson 12, I preferred to have students complete a written evaluation of their partners’ mathematical arguments. I suggested that each student complete an evaluation on a sheet of paper that included some points we brainstormed on the overhead. They provided the suggestions for

evaluation, and I was able to help “steer” them toward what I was looking for. Still, because they felt that they created the evaluation, they “owned” the evaluation and were more apt to buy into it. They were also able to clearly explain the rules that exist in the Multiplication Chart. This is actually an excellent time to use authentic, alternative assessment methods and have students tell what they know through class presentations using the overhead and student-created posters.

Despite the fact that this unit had progressed for the last month, many ESL students were still struggling with putting their mathematical thoughts into English. This was a challenge for me to try to remedy from a teaching perspective because these students would still have had a hard time if I had adapted the assignment to Spanish because many cannot write in Spanish. One solution which worked well for me was to discuss their answers with these students orally.