

BORDER PROBLEM PART I DISCUSSION QUESTIONS

THE ACTIVITY

What were the mathematical tasks and activities of this lesson? How did they follow from the main activity?

AND/OR

1. The sequence of events in this lesson was as follows:
 2. The teacher collected “wrong” answers to the Border Problem and asked students how they were thinking about them.
 3. The teacher collected different methods for thinking about the correct solution.
 4. The teacher gave a method from the previous day’s class and asked students to make sense of it geometrically.
 5. There was a discussion of the similarities and differences between methods.
 6. The teacher posed a question about shrinking the square to a 6-by-6 grid and there was some discussion of the answers.
- What do you think about each of these events? What do you think about the progression of the events? What mathematics did each afford?
 - What were the decision points in the lesson that changed the flow of the activity and when did they occur? Were there any you would have done differently?
 - What mathematical content did the lesson address? Which mathematical processes?
 - Where could this lesson go from here? What do you think students could work on in the next lesson?

THE TEACHER

- How did the teacher respond to the students’ different methods?
- How did the teacher capitalize upon students’ diverse ways of thinking?
- How did she gather information from the students? What kinds of information did she gather?
- What would you have done differently if you were the teacher? At which points would you have made different decisions? Why?

THE STUDENTS

- What do you think students learned in this lesson? Do you think it was different for different students? How? Why?
- What were the various roles students played in the classroom? What different things were the students required to do?
- What sorts of questions did students ask?
- Which students were contributing or not contributing to the discussion?
- At one point in the lesson (at about 9:30 in the clip), you see a student with his head on the desk. What could this indicate? What would you do about this if you were the teacher?

THE ENVIRONMENT

- What classroom norms did you see in place in this class?
- What do you think the teacher had done to set up these norms? What did she do in this lesson?
- How was the classroom arranged? What materials were used and what role did they play?
- What in the physical environment made the mathematics more visible?

These questions came from the Boaler-Humphries book.