

Third Homework

Reading assignment: Casebook, chapter 3

In the casebook, read chapter 3, “Making Sense of Addition and Subtraction Algorithms,” including the introductory text and cases 12 through 14. Use the questions posed in the introduction to guide your reading.

Writing assignment: A math interview

One major thread of this seminar is the examination of the ways students think as they build an understanding of the number system. One approach to learning about students’ thinking is to listen carefully to individuals as they articulate their thoughts while doing mathematical tasks.

The math interview is one strategy for obtaining evidence about students’ thinking. An interview helps you delve into the thinking of an individual student, to get underneath the surface of the student’s responses to better understand his or her reasoning. Your assignment for the next session will be to conduct and write about an interview with a student.

In your interview, explore the student’s ideas about the number system, drawing on what we have done in this seminar. Ask the student to perform some tasks, which might include questions about reading and writing numbers, counting, adding, or subtracting. You might want to use activities or questions from the cases we have read, from the videos we have watched, or from activities we have done together in class. These will give you a place to start, but feel free to add your own tasks and questions.

Although you will need to plan questions and tasks in advance, you will also need to carefully follow what the student does and says during the interview so you can follow up with questions or problems that seem appropriate. Keep in mind that your job in the interview is to find out as much as you can about the student’s ideas, not to teach the student anything. Record the interview so you will be able to listen to it later.

Include the following in your write-up: what tasks you chose, what happened during the interview, what you learned (or didn’t learn) about the student’s ideas, what surprised you, what questions you still have, and what you learned from conducting the interview. Give enough information so that a reader can understand what happened and what you learned.

Bring three copies of your write-up to share at the next session.