Math391   Third Meeting
Assignment to Be Completed Prior to Fourth Meeting

a. **Classroom observation:**

Pick one classroom observation and answer the following questions:

Focusing on the students:
1. What is the core mathematics the students are engaged in?
2. What ideas do the task and work of the students address?
3. How are students experiencing the mathematical ideas?
4. Are students grasping the conceptual understandings of the math?
5. Is there depth in the activities students are engaged in?
6. What kinds of mathematical thinking are students involved in (procedural, conceptual, problem solving, justification)?

Focusing on the teacher:
7. What does the teacher believe is the core math of the lesson?
8. How has the teacher constructed the lesson to address these ideas?
9. What experiences/mediums are used to teach the idea?
10. How does the teacher assess students' understanding?
11. How is the mathematics extended/adjusted for students own learning demands?
12. What does the teacher understand about the development of students' ideas about the mathematics?

b. **Required reading for next meeting:**
Read Chapter 4 in the book (*Connecting Mathematical Ideas* by Jo Boaler and Cathy Humphreys). Also, watch the corresponding videos from the CD. Write a brief summary (no more than two pages) of these texts and video. Again, your summary should be focused on what you think are the most salient and interesting points, and express your overall opinion of the texts. Please also include your opinion about the following questions:
Recall when you learned how to divide fractions (if you can). Did you have a conceptual understanding, or you just memorized the procedure? Did your teacher give some visual explanations? Do you have any interesting way to teach how to divide fractions?

c. **CSUN mathematics courses:**

Most of the students learn how to divide fraction on the procedural level. A few will have a conceptual understanding of it even later. Can you think of any topics in math that you learned at the procedural level, and later you gained the deeper understanding because a professor explained it in a different way, or for some other reason?

d. Interesting problem:

Modeling Fraction Expressions

Using this drawing only, explain in details how you can see…
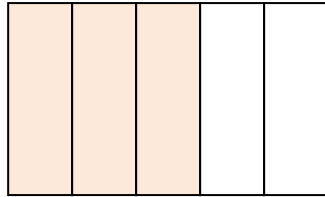
a) 3/5 of something?

b) 5/3 of something?

c) 3/5 of 5/3?

d) 5/3 of 3/5

e) 2/3 of 3/5?

f) 1 ÷ 3/5

g) 5/4 ÷ 3/4

This is just for fun. You don't need to turn this in. But if you ever teach fractions, this puzzle is a fun way to reinforce the concept.

FRACTION HUNT

1.   The first 1/7 of instant + the first third of fat   -----------------------------

2.   The first 2/5 of young + the first 1/10 of understand   -----------------------------

3.   The first 1/4 ugly + the first 1/5 of settlement   -----------------------------

4.   The first 1/4 of youthful + the last half of pour   -----------------------------

5.   The first 1/4 of hesitate + the last 2/3 of sad   -----------------------------

6.   The last 1/8 of elephant + the first 1/5 of order   -----------------------------

7.   The first 3/4 of fine + the last 3/4 of dish   -----------------------------

8.   The last 1/6 of cement + the first 3/7 of history   -----------------------------

9.   The first 1/3 of garlic + the first1/2 of meat   -----------------------------

10.   The last half of bath + the first 1/3 of end + the last 2/7 of require ---------------------------

11.   The first 2/5 of water + the last 3/4 of fits   -----------------------------

12.   The last 1/6 of Glenda   --------------------------

13.   The first 1/3 of principal + the first half of zero   --------------------------

14.   The first half of food + the last quarter of door   --------------------------

15.   The first 1/6 of yellow + the first 2/3 of out   --------------------------

16.   The first 5/8 of underage   --------------------------

17.   The first 1/4 time + the first 2/4 of head   --------------------------

18.   The first 3/6 of tablet + the last 1/3 of turtle   --------------------------

19.   The first 2/9 of offensive   --------------------------

20.   The last 1/8 of infinity + the last 3/4 of hour   --------------------------

21.   The last 1/3 of remote + the first 3/7 of achieve + the last 1/4 of recorder   -------------

22.   The first third of get + the second fourth of Jody   -----------------------------

21.   The first half of loud + the last half of book   -----------------------------