

Unit Plan

Your unit plan is due on Thursday, December 6, 2007 by 4 pm.

A. [5] **Heading**: Include the title of the unit, a summary paragraph, and a statement of what the unit objectives are.

B. [25] **Day to Day plan** of entire unit including for each day:

- a. A brief summary of the topic
- b. Lesson objectives from the [NYS Mathematics Core Curriculum for Pre-K to Grade 12](#)
- c. Anticipatory set
- d. Developmental activity overview
- e. Assignments (if appropriate)

NOTE: The 3 days that are fully developed lessons do not need an overview.

C. [45] **Three Student-Centered Lesson Plans** written in the format presented in class. The three lessons must address the following requirements:

- a. One cooperative learning lesson centered on an investigation.
- b. One lesson that incorporates manipulatives. The entire lesson does not have to involve the use of manipulatives, however they should be the main focus of the lesson.
- c. One lesson that incorporates technology. Again, the entire lesson does not have to involve the use of technology, however it should be central to the concept being developed in the lesson.
- d. Each lesson plan should include how the previous day's homework will be reviewed if there was any assigned. It is assumed that homework is a regular part of the expectations in this class.

NOTE: The 3 plans should be included with your work from part B. That is, I will read the daily plan for day #3 and following that is either day #4's daily plan or a fully developed lesson for day #4.

D. [15] **Unit Assessment**: Prepare 3 assessments that you will use with your students during the unit. One should be the unit assessment. This assessment should require one day only. Note: A rule of thumb is to allow students three to four times as long as it takes you to answer the questions. The other two assessments should be brief alternative assessments (only a portion of a class period is devoted) that offer you insight into the students' understanding of certain concepts. Include scoring schemes for each assessment.

E. [10] **Your Response** to the following questions (as you would to an 8th grade class) that may come up in this unit:

- a. Why can't we divide by zero? Offer two different approaches to assist students in understanding why this is not possible. Your response should provide some insight into what we mean by undefined.
- b. If I divide the fraction $\frac{8}{15}$ by $\frac{2}{5}$ and simply divide across the top and divide across the bottom as I do when I multiply, it gives me the correct answer of $\frac{4}{3}$. How do you respond to a student who wants to solve the problem this way?
- c. A student asks you "Why it is that we end up multiplying when we are dividing fractions?" Explain why the "multiplying by the reciprocal" rule actually can be made to make sense in light of this seeming conflict.
- d. Why does a negative times a negative equal a positive? Provide two explanations. (Hint: You might see what you can find on Postman Stories or Dieting/Weight situations in this context along with the more typical distributive property explanation.)