Math 133: Calculus II

Partnerships: Cooperative Calculus

partner – n. One that is united or associated with another or others in an activity or a sphere of common interest.

partnership – n. A relationship between individuals or groups that is characterized by mutual cooperation and responsibility, as for the achievement of a specified goal.

The Free Dictionary by FARLEX, accessed June 5, 2014

When working in a partnership it is important to remember that varied backgrounds and experiences naturally induce varied explicit and implicit assumptions and attitudes towards each other. Each student should work diligently to be a cooperative, contributing member of the partnership who is helping the group achieve a common goal. The bottom line is that successful partnerships are founded on mutual respect. This can be achieved by:

- using your partners' names;
- recognizing that all partners matter and actively listening to all other partners;
- graciously inviting all of your partners to offer insights, suggestions, opinions, questions, etc.;
- being courageous enough to offer your own insights, suggestions, opinions, questions, etc.;
- being cognizant of the process by which partnership functions and how you operate within the partnership;
- thanking your partners at the end of each session.

Discussion Partnerships

For each class period, you will be randomly assigned a discussion partner. You and your discussion partner will work together at specific times during the class period to help each other understand the material. Importantly, the discussion partnerships will change with each class, allowing you to meet most of your classmates and to work with students from a variety of backgrounds.

The assignment of partners will occur as you enter class. When you enter the class, draw a Bingo ball from the bag closest to the door (without looking in the bag!), determine the number on the ball, place the ball in the bag farthest from the door, and sit in the seat associated to that number. When facing the back of the room, the front, left seat is number one and the numbers proceed to the right until the end of the row is reached. They continue from the left of the next row of seats.

The discussion partners will then be those sitting in seat 1 and 2, those sitting in seat 3 and 4, etc. I will make adjustments for unassigned partners at the beginning of class.

Warm-up Exercises
Most classes will begin with a warm-up exercise posted on the screen. The warm-up exercises help us reset our frame of mind to be ready to engage with mathematics. The exercises typically consist of a calculation. The warm-up will also be the time to introduce yourself to your discussion partner for the day. The warm-up period will conclude approximately two minutes into the class time.

1. Begin the warm-up exercise as soon as you arrive.
2. When your partner arrives, introduce yourself even if you think they know your name.
3. Attempt to complete the warm-up exercise on your own.
4. Discuss your solutions, thoughts, and confusions (regarding the warm-up) with your partner.
5. Formulate an answer all partners understand and be prepared to share it with the class.

Short Discussions
Up to a few times each class period we will break for a short discussion of the material. This will be accompanied by a prompt from me. Discussion partners will work together to answer a question, complete a computational exercise, identify misunderstandings, solidify concepts, and/or develop questions about the material.

1. Based on the prompt from me, either the odd or the even partner will speak first.
2. All partners should contribute to the discussion; in fact all partners are required to say something!
3. Identify any thoughts, ideas, confusions, or new questions generated by the discussion.
4. The partnership will formulate a response to the prompt that all partners understand.
5. Each partner should be prepared to share the response with the class.

After a few minutes, I will randomly select a student, and that student (and *only* that student) should explain the partnership's answer to the class. It is ok to say that you and your partner were not sure of an answer, but I will ask a followup question regarding what you and your partner discussed while you were trying to answer the question.