THINKING THE CALCULUS WAY
HOMEWORK 7

For FRIDAY, July 9:

Read sections 3.1, 3.2, 3.4 and 3.5 of Stewart's Calculus.

Complete the following problems in sections 2, 4 and 5:

3.2: Problems 3, 7, 9, 14, 23, 31, 35

3.4: Problems 1, 3, 8, 9, 16, 22, 35, 40

3.5: Problems 1, 5, 6, 7, 12, 17, 22, 34, 43, 52

EXTRA PROBLEM (can be handed in any day this week):

5. One hundred hungry people stand in a line outside McDonald's, all facing the same direction. Each person is wearing a shirt, on the back of which is a picture of either Grimace (the giant eggplant-colored guy) or Ronald McDonald himself. Each person in line can then only see the back of the shirts of the people in front of them, but not their own nor those of the people behind them. Due to the concentration necessary to the production of perfect burgers and fries, the people in line are not allowed to speak to one another nor are they allowed to move in any way, unless instructed by the Hamburglar himself, who patrols the line. In a rare moment of compassion, the Hamburglar starts at the back of the line and offers each person the same extraordinary deal: "Robble robble. If you can correctly guess who's on the back of your shirt, robble robble, I will give you a free cheeseburger, robble robble." Devise a strategy that maximizes the number of people that receive free cheeseburgers.