MAT 218 FALL 2008
FEEDBACK ON PROBLEM SET 9

Below please find the solutions to the further problems, using the notations from Spivak.

1. Solution to selected exercises.

Part 2, Further problems.

1: If A is the unit cube with the usual orientation, then its boundary is given by the 2-chain

$$\partial A = -\Delta(0, x_2, x_3) + \Delta(1, x_2, x_3) + \Delta(x_1, 0, x_3)$$
$$- \Delta(x_1, 1, x_3) - \Delta(x_1, x_2, 0) + \Delta(x_1, x_2, 1).$$

2: With the induced orientation from ∂A, the face A_1 is equal to $A_1 = -\Delta(x_1, x_2, 0)$, so

$$\partial A_1 = \Delta(0, x_2, 0) - \Delta(1, x_2, 0) - \Delta(x_1, 0, 0) + \Delta(x_1, 1, 0).$$