In The Name of God, The Compassionate, The Merciful

Name: .....

Student ID#: .....

Statistical Pattern Recognition (CE-725)
Department of Computer Engineering
Quiz #7 solution - Spring 2010

Assume that the training set for two classes are:

S1: {(2, 2), (1, 3), (2, 4), (0, 4)}
S2: {(4, 0), (5, 0), (5, -0.5), (6, -0.5)}

Find the optimum line that SVM finds for the case of no training set error. Find the support vectors and margin of the optimal SVM (Justify carefully why it is the optimum line).

Hint: Do not try to solve the SVM quadratic optimization!