ComS 474
Homework 2

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1) $x = [1.1, 2.2, 3.3, 1]^T$

2) $w^T x = [1.1, 0, 3.3, 0]^T > 1$, therefore the class is 1.

3) $\sum_{i-1}^{n}(W^T x_i'' - C_i)^2$, where C_i is the class of x_i (1 or -1)

4) I have found no answer to what this question's wording means, so here's the derivative:
$J(W)' = 2\sum_{i-1}^{n}(W^T x_i'' - C_i) * x_i''$

5) $J(W) = \sum_{i-1}^{n}((-1)(W^T x_i * C_i) - 1)$