Name		ID		Section	

1. Suppose there is a error function as the following, $J(\theta) = (\theta - 3)^2$, $\theta = 3, \alpha = 0.2$. What will be the value of θ after one iteration of gradient descent algorithm. [2.5]

2. Suppose you have a huge data, 1 billion instances and 100 features. What problems there may be. How do you solve it? [2.5]

3. Can we use $J(\vec{w}) = \sum_{i=1}^{m} |\hat{y}(i) - y(i)|$ as a cost function for linear regression problem? Why or why not? [2.5]

4. Think of a problem where you have to predict if the rate of US dollar against Bangladeshi Taka. What could be features if you are designing it as a machine learning problem. What type of problem it is? [2.5]