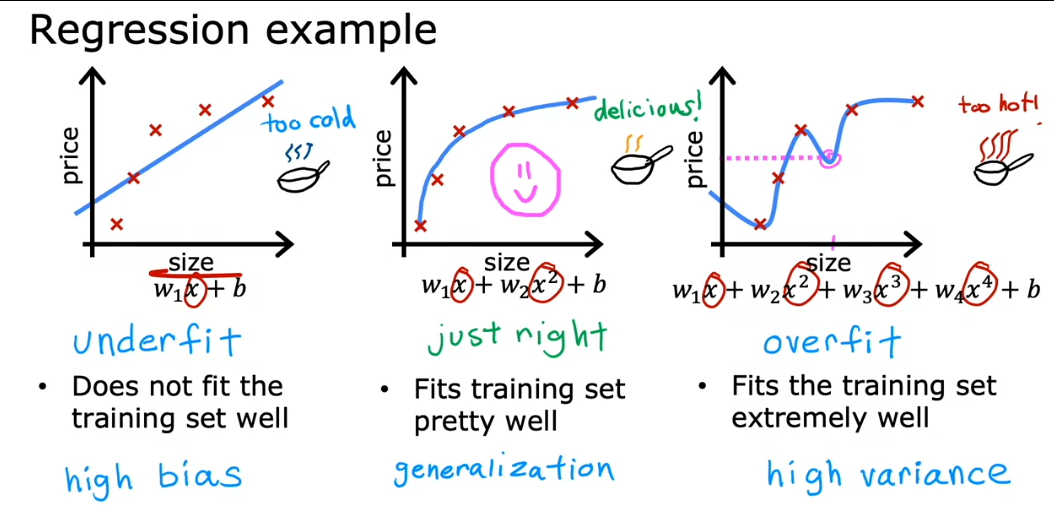
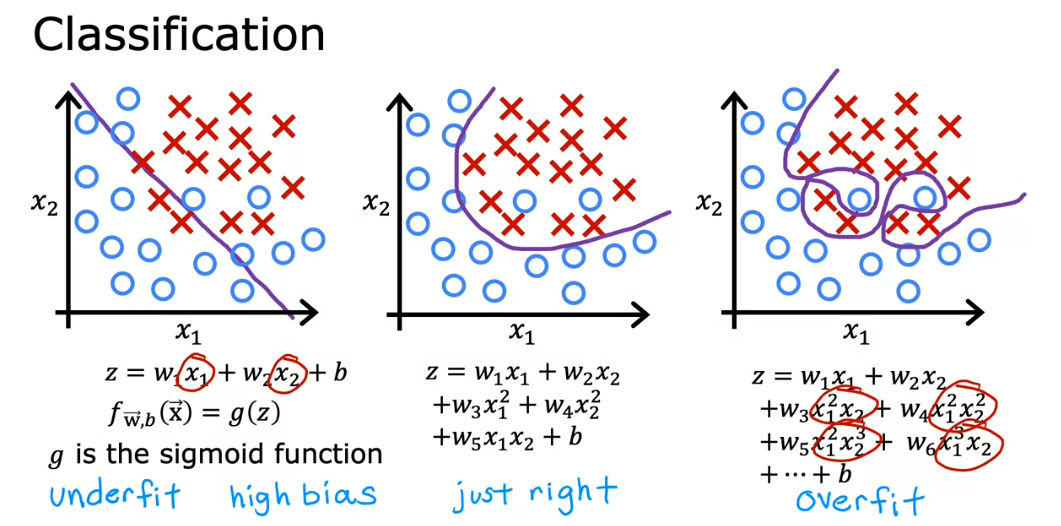
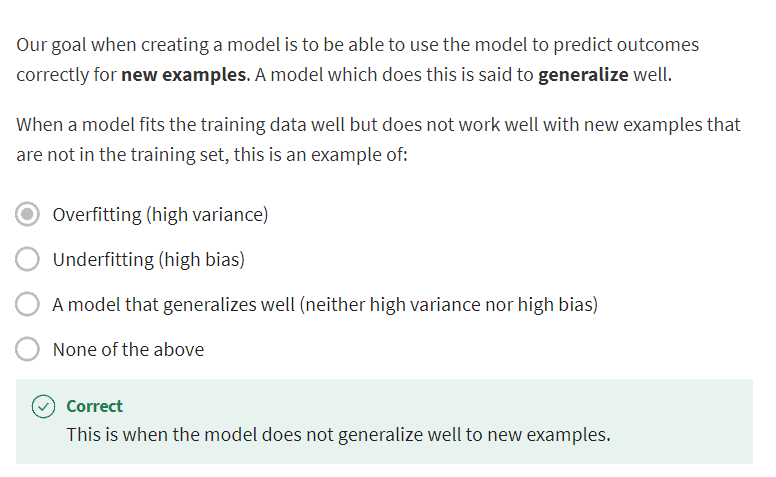
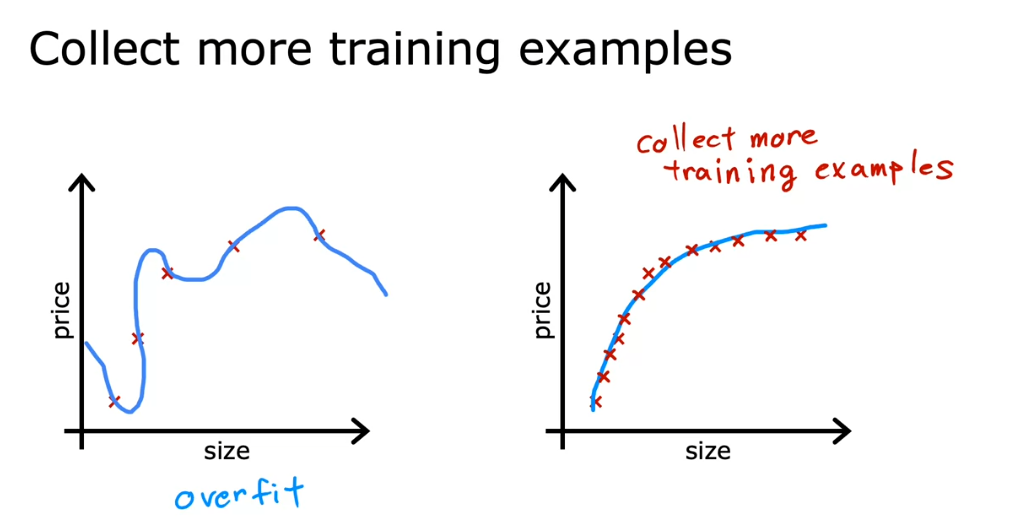
# The problem of overfitting

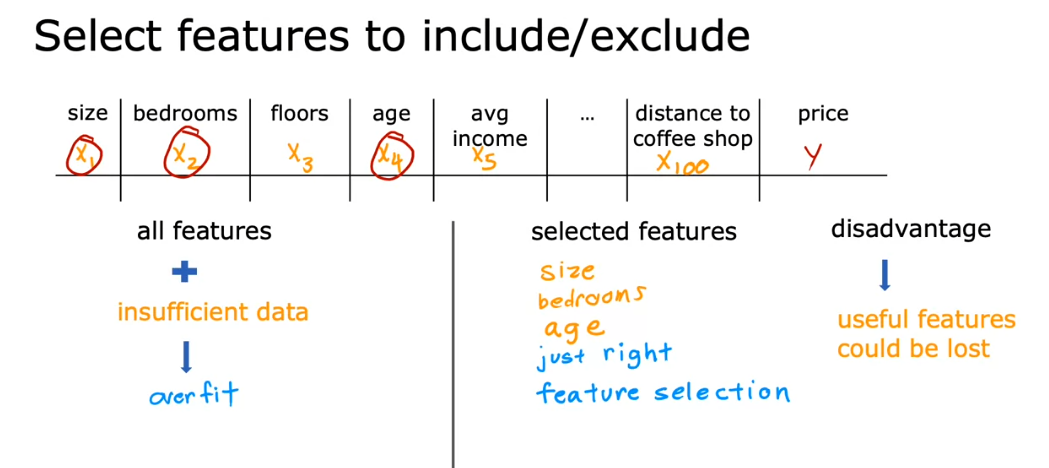


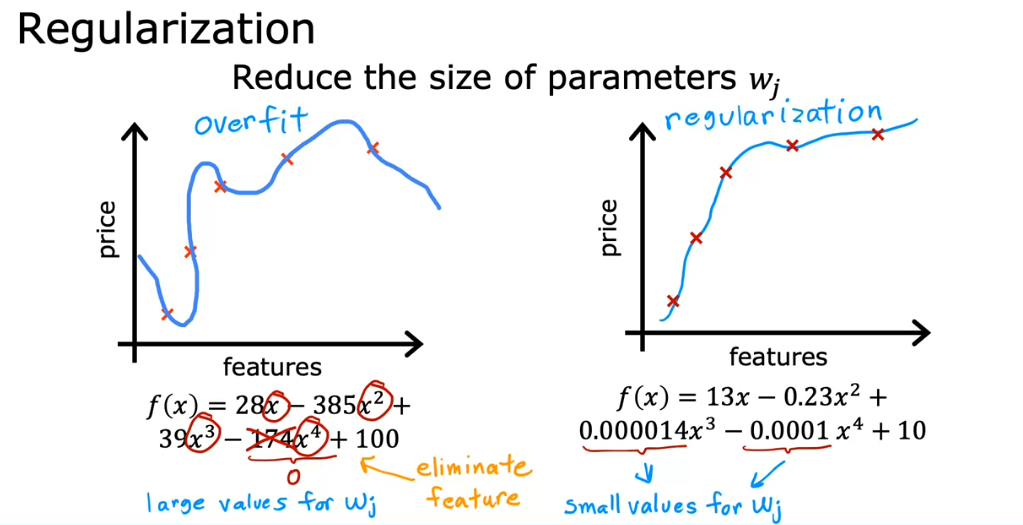




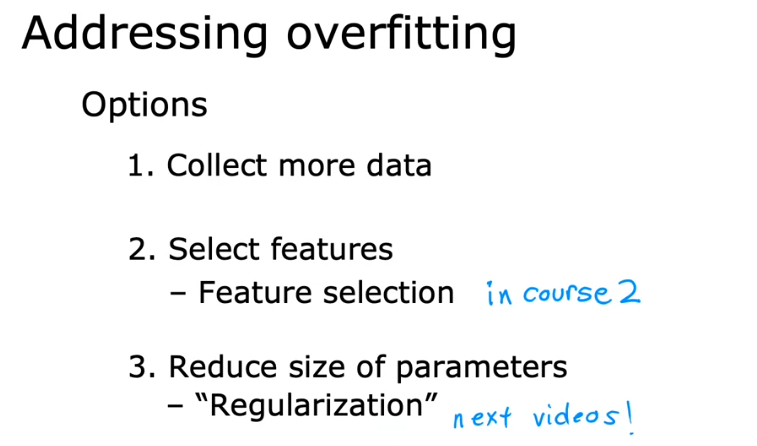
# Addressing Overfitting

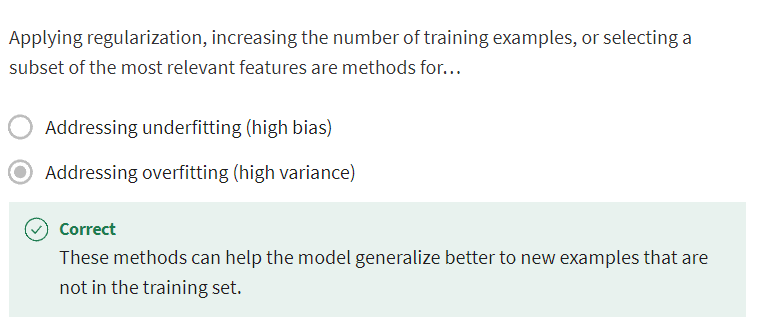




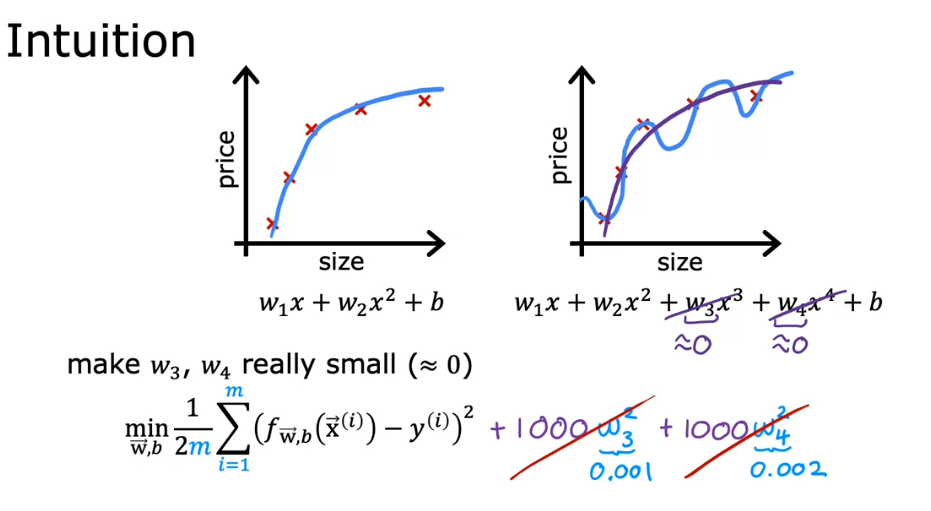


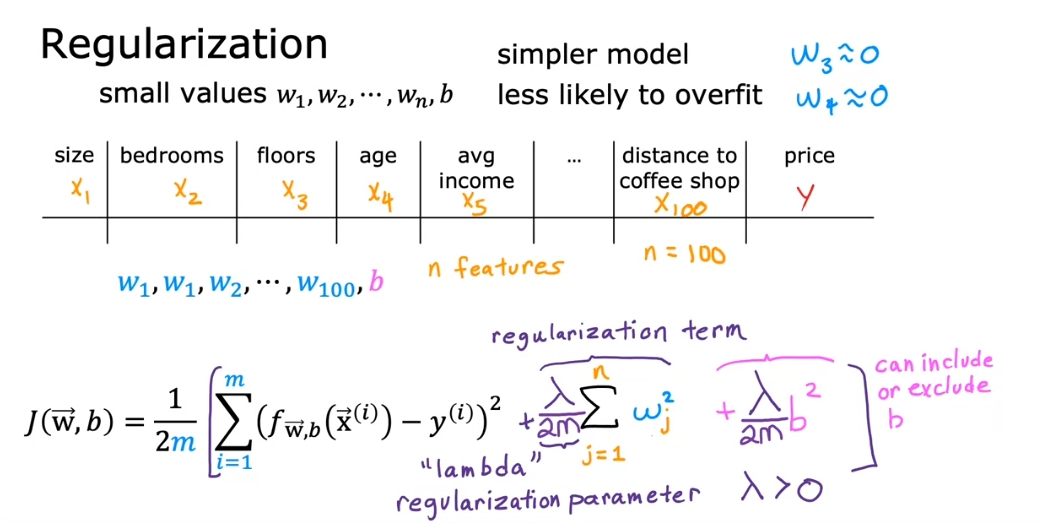
* Keep all features but small values for Wj parameters
* “b” not usually regularized, little difference only

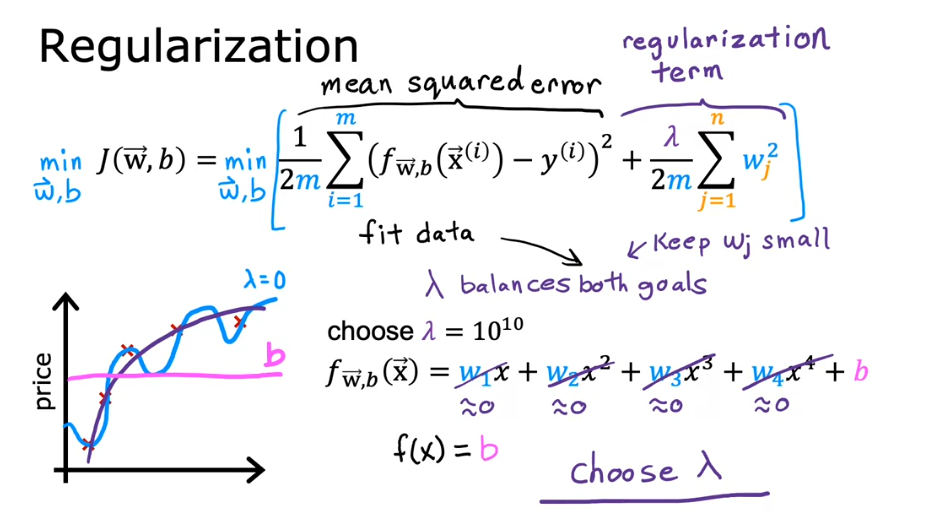




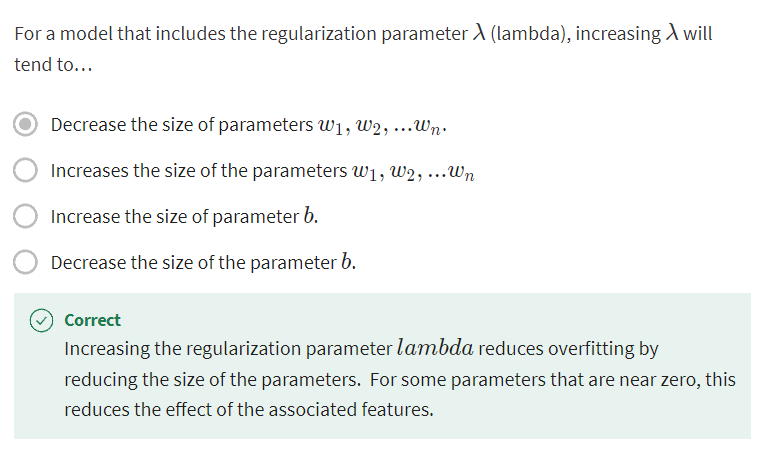
# Cost Function with Regularization



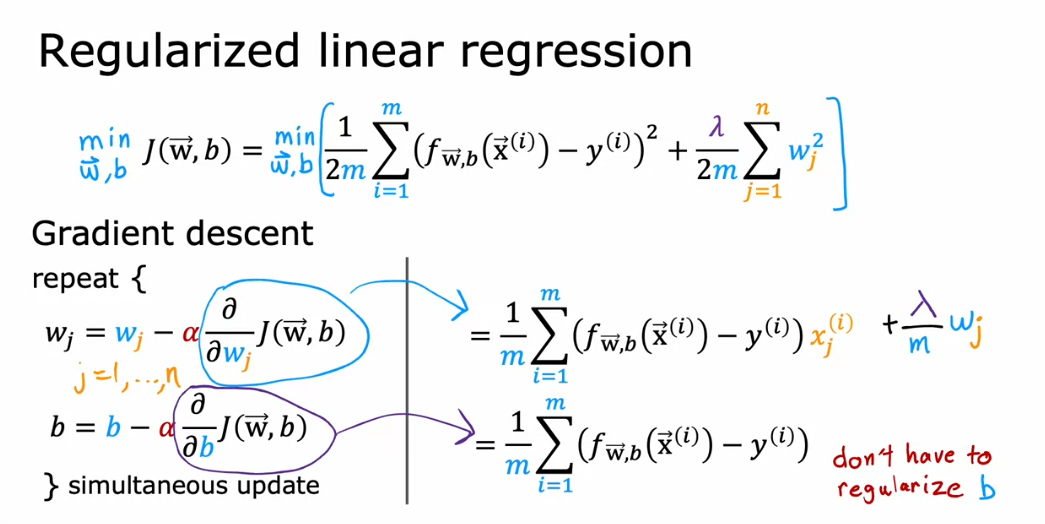


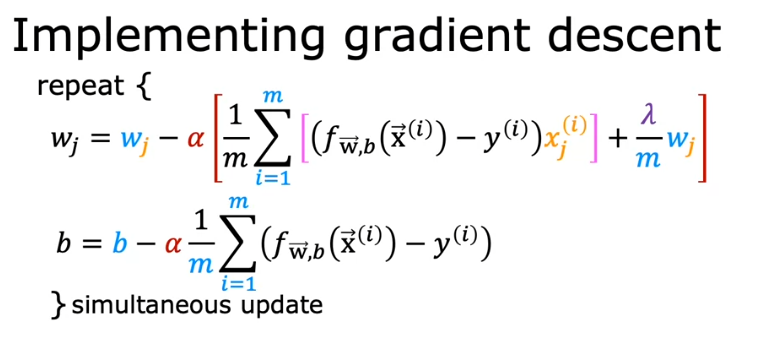


* When lambda = 0 -> overfit
* When lambda = very large -> underfit

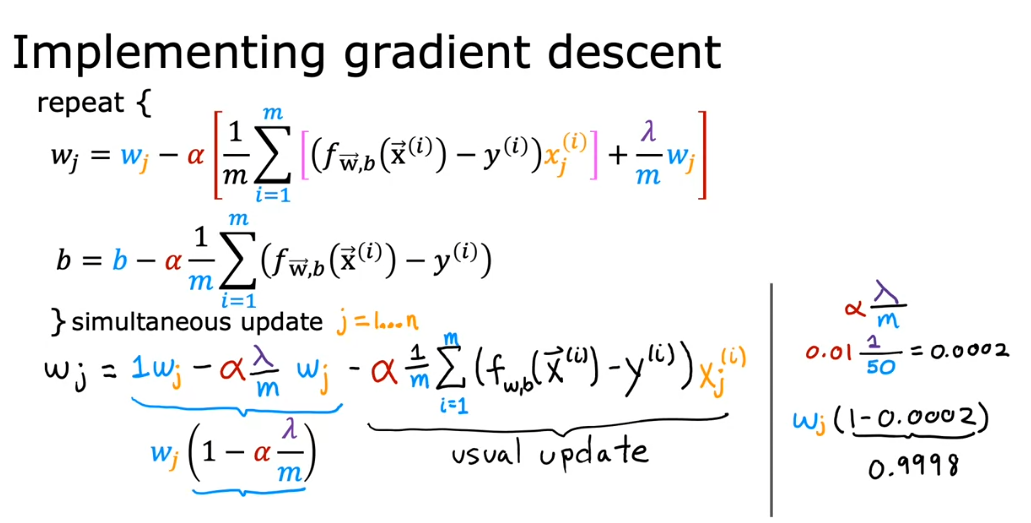


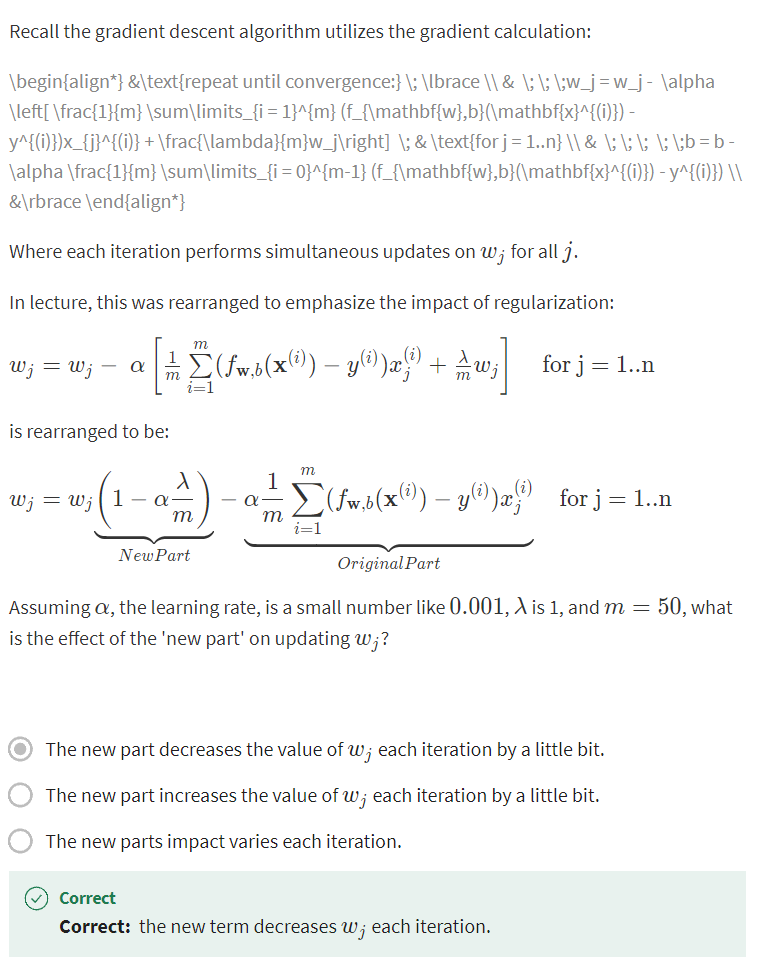
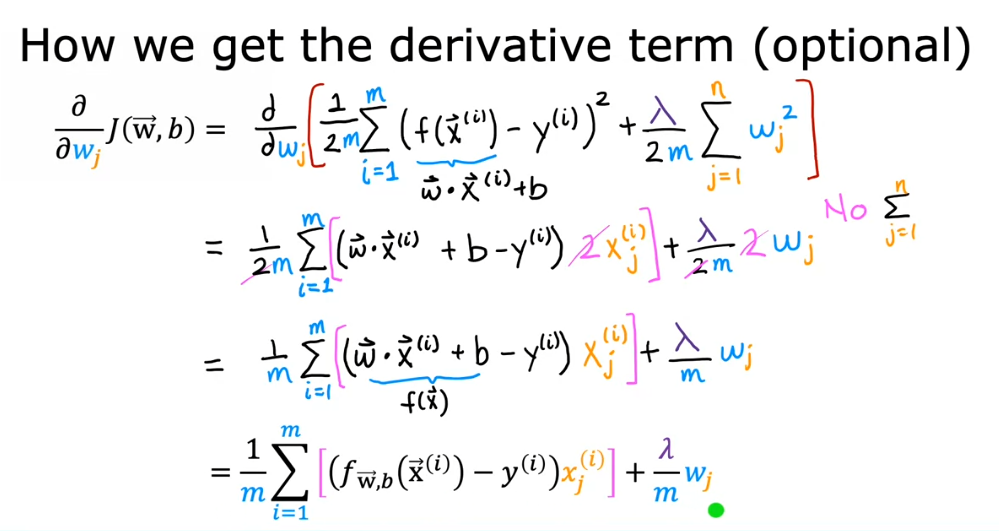
# Regularized linear regression





Deep diving





# Regularized logistic regression

