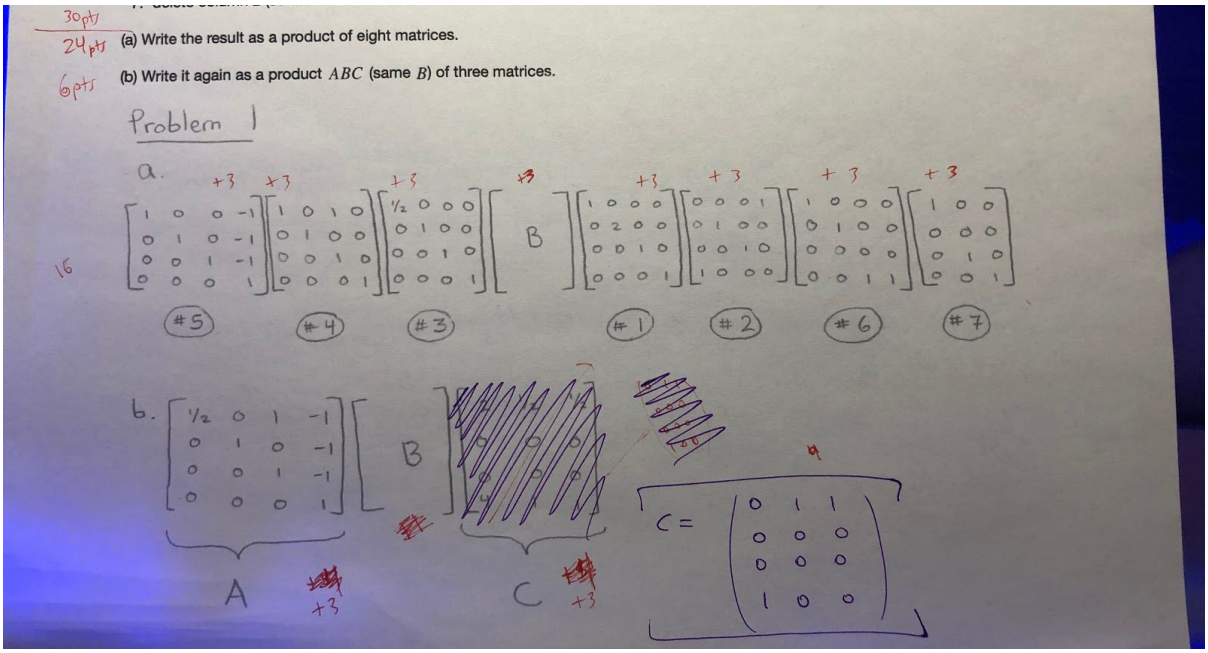
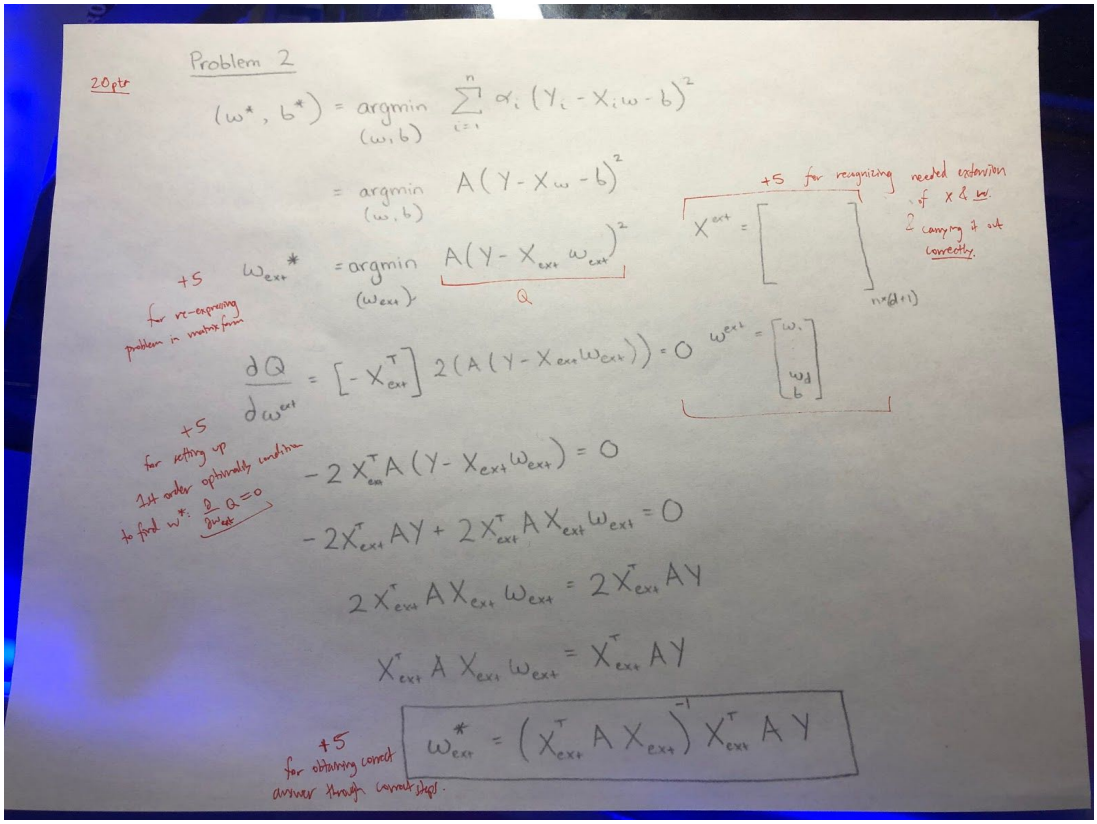
Problem 1 (30 pts)



Problem 2 (20 pts)



Problem 3 (30 pts)

a. Visualization of given data ← 3 pts
b. Calculating OLS fit (coefficients) ← 20 pts
    i. If you used scikit-learn or any other built-in OLS function for the OLS model, 15 pts were deducted.
    ii. 10 pts deducted for incorrect calculation of coefficient and/or intercept (5 for each)
c. Prediction of 2018 value ← 3 pts
    i. 2 pts deducted if prediction is incorrect
d. Visualization of fit and data on same plot ← 4 pts

Note: 3 pts deducted if all values (coeff, intercept, prediction) were just slightly off (by <10)

Problem 4 (20 pts)

a. Correct ridge & lasso implementation and graphs ← 18 pts (9 pts each, 5 for correct training and 4 for graph)
    i. 2 pts deducted for missing labels on features
    ii. 1 pt deducted for missing axis labels
b. Comparison of methods ← 2pts
    i. 1 pt deducted for incorrect or incomplete comparison

Partial credit was deducted if the version of your code uploaded to Blackboard did not run (i.e. small indexing/iterating errors, variable misnaming, or incorrect data loading that required small tweaks to run correctly). Every effort was made by the graders to give as much credit as possible.