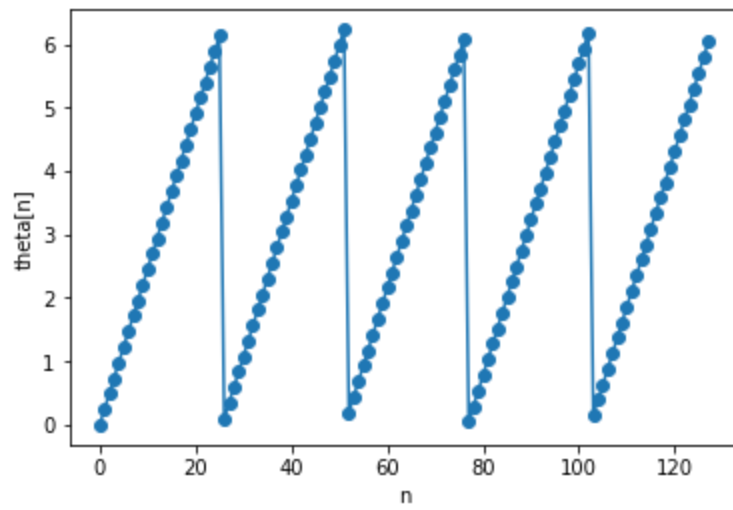


Plots:

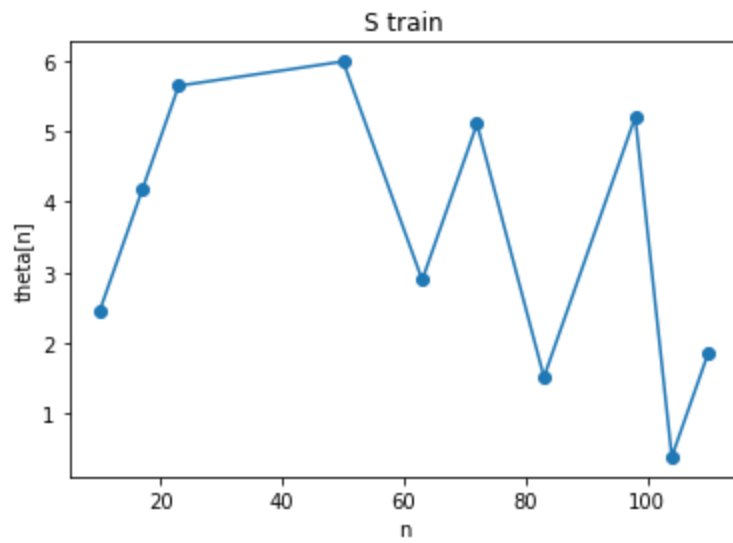
Part a:

Theta [n] vs n:

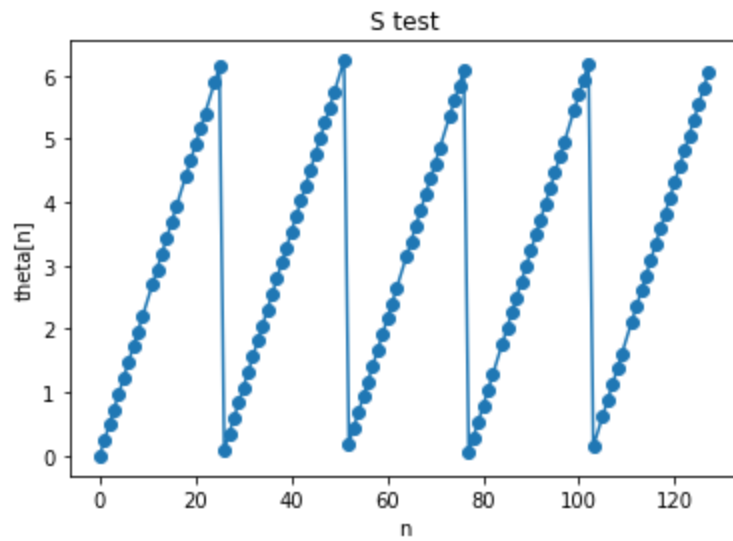


Part b:

Training points:

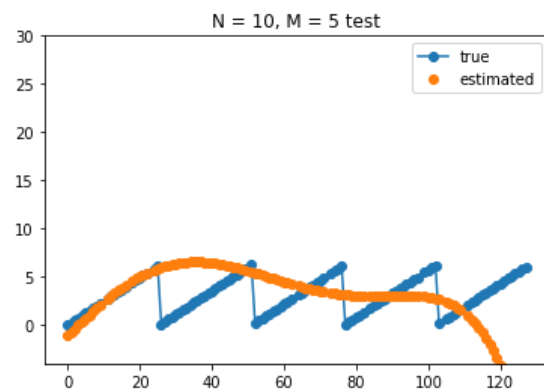
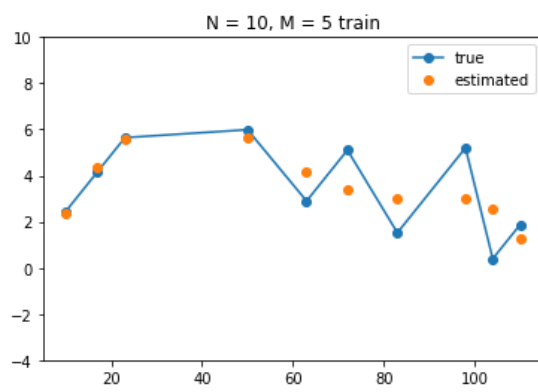


Testing points:

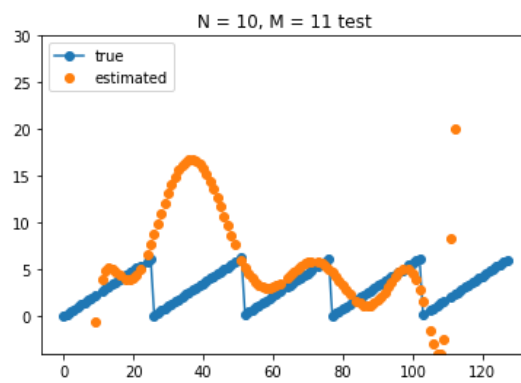
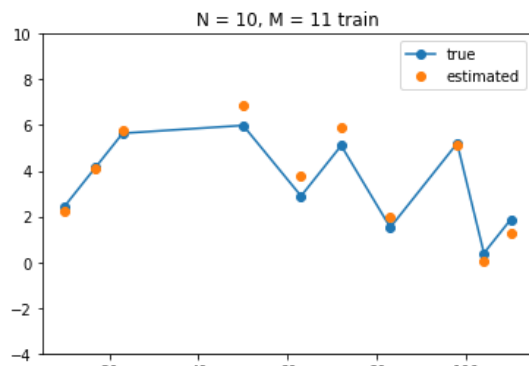


Part c: Linear Regression

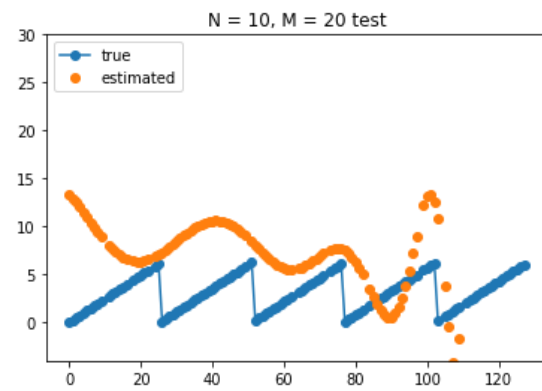
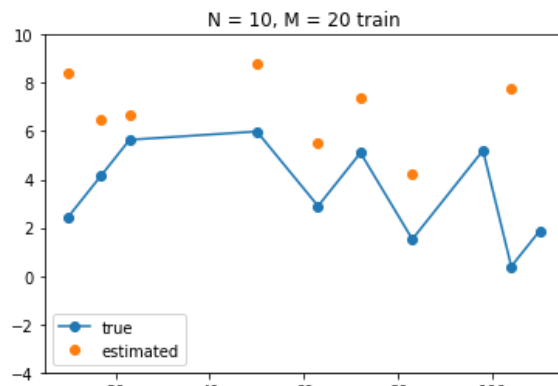
M = 5



M = 11

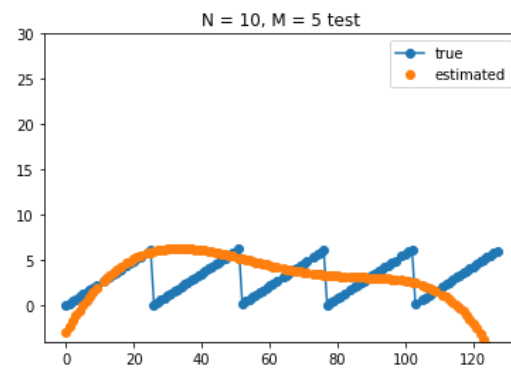
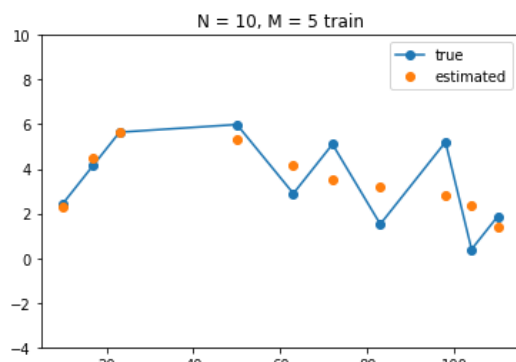


M = 20

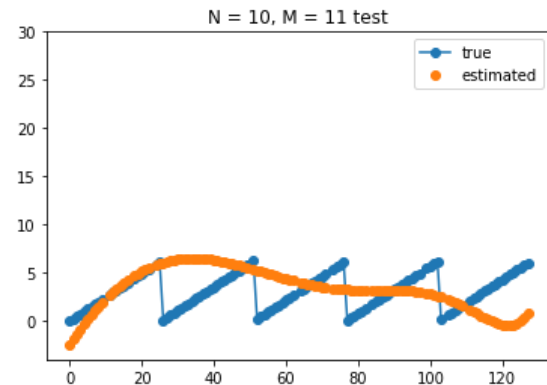
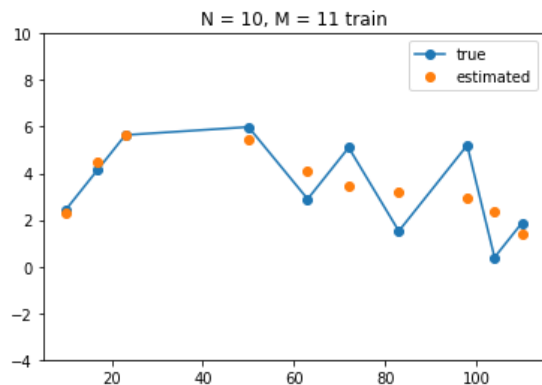


Part d: Gradient Descent
learning rate = 0.01

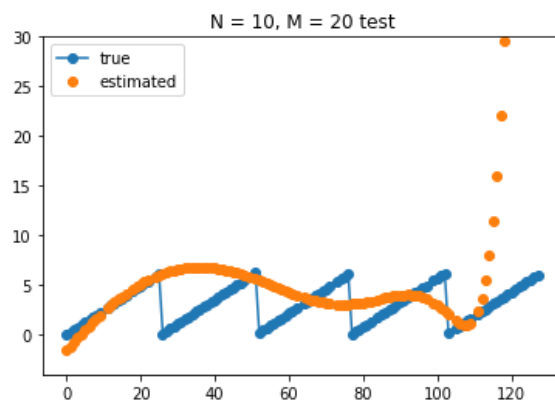
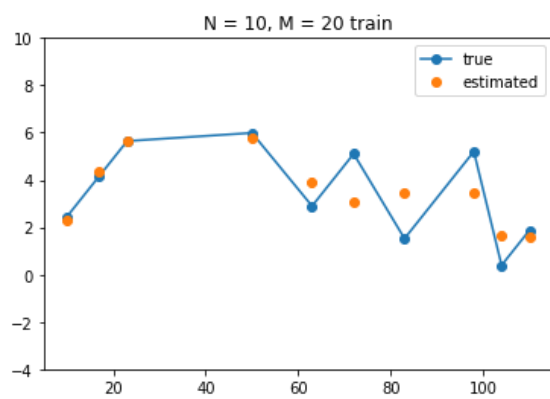
M = 5



M = 11

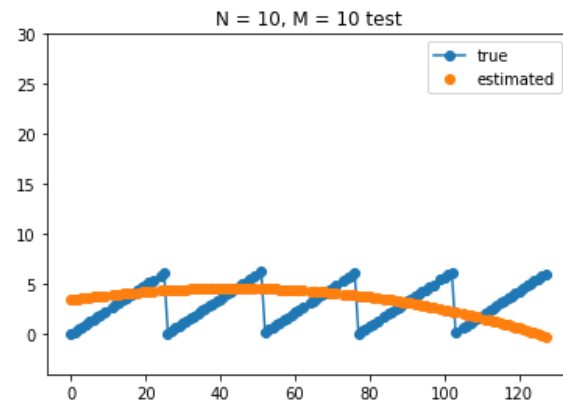
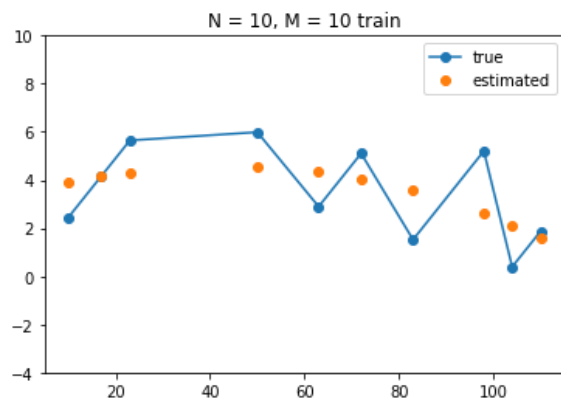


M = 20

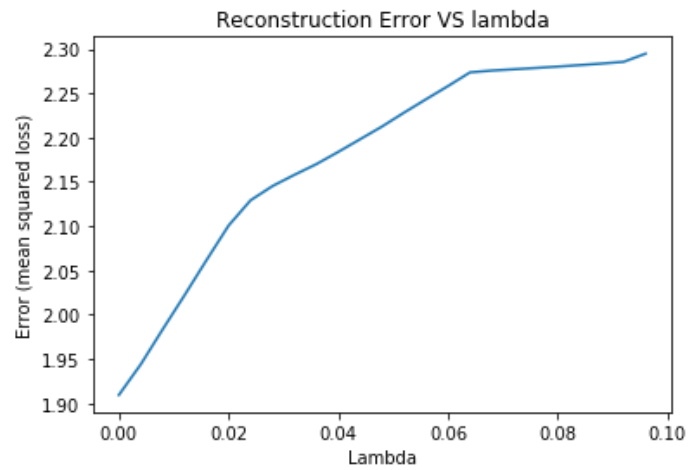


Part e: LASSO

M = 10, lambda = 0.1, learning rate = 0.01



Reconstruction Error Vs Lambda, lambda in range 0 to 0.1



Weights VS Lambda, lambda in range 0 to 0.1,

Lambda at which most of the weights are almost 0 = 0.07

