MTH 451/551 – Homework 1

1. (10 points) Do [TB] 2.1.

2. 551: (10 points) Do [TB] 3.1.

3. (20 points) Do [TB] 3.3 (a) and (b).
   551: (10 points) (c) and (d).


5. (40 points) Do [TB] 5.3. Also (h): find $A_1$ as defined in Equation [TB] (5.4) (we know the SVD is not unique, is $A_1$ unique??). Write out $A - A_1$. Convince yourself (no need to turn in) that $\|A - A_1\|_2 = \sigma_2$. 