Comments about graded problems in HW1

- CQ11: The property of the matrix norm that has been asked to prove has to be proved for **any** norm and not some particular norm (e.g. sup norm or frobenius norm). So we have to use the generic norm properties only for the proof. (Hint: Use the sub-multiplicativity property and homogenity property)

- CQ10: A matrix norm also satisfies sub-multiplicativity property. i.e. $f(AB) \leq f(A)f(B)$. This property also has to be proved for both the norms for completeness.

- CQ12(a): Most of the people have not attempted Q12. The question does not really need you to know about QR decomposition and all the relevant information required to solve the problem has been provided in the question. All the facts required to solve the problem pertain to the fundamental subspaces and their relationship to each other.

- CQ8(a): A minor point, that many of you have missed out is that the degeneracy condition for norm, $||x|| = 0 \, iff \, x = 0$, is a if and only if condition. So you have to actually prove both sides. In our case, if part is trivial. However it still has to be mentioned and in many norms it might not be as trivial and there it has to be proved also.