MATE 6672 assignment 2

6. Exercise 9 p. 84.

7. Exercise 11 p. 85.

8. Exercise 12 p. 85.

9. Exercise 13 p. 85.

10. Finish the proof discussed in class: if $A = QR$ with $rank(A) = n$ (A is mxn), then the lower level sets of $x \longmapsto |Ax - b|^2$ are bounded. (Here, $|\cdot|$ is the euclidian norm in R^n). You will use that $M = \sup\{|Qy| : |y| \leq 1\}$ is finite, and you will find it convenient to let $Rx = y$, in which case, x is bounded just in case y is.