Due: upload to Gradescope by Friday 11 October 2019 at 3pm.

Reading: Chapter 1.1 – 1.3 from the textbook.

Submit written solutions to the following exercises from the textbook. Grading: 1 point per exercise for completeness. The exercises marked with a ($\star$) will also be graded for correctness, and will be assigned an additional 3 points each.

Chapter 1.2:
Ex. 2
Ex. 3
Ex. 5($\star$)
Ex. 8
Ex. 25
Ex. 29($\star$)

Chapter 1.3:
Ex. 1($\star$)
Ex. 2
Ex. 3($\star$)
Ex. 4

Submit a written answer to the following question from the lecture:

Q: Suppose we are given a system $Ax = b$, with A an $n \times m$ matrix. What can you say about the solution set of the system in the following cases? Provide a brief explanation.

(i) $\text{rank}(A) < n$

(ii) $\text{rank}(A) = n$

(iii) $\text{rank}(A) < m$

(iv) $\text{rank}(A) = m$