MATH 603 Fall 2013 Homework #3

Due Oct. 17, Thu in class

- Textbook, Section 4.3, p.190: 4.3.11, 4.3.12;
- Textbook, Section 4.4, p.206: 4.4.9, 4.4.10;
- Textbook, Section 4.5, p.219: 4.5.9, 4.5.12;
- Textbook, Section 4.6, p.237: 4.6.9;
- Textbook, Section 4.7, p.247: 4.7.19;
- Textbook, Section 4.8, p.257: 4.8.3, 4.8.8.
- Let A and B be two $m \times n$ real matrices. Suppose that each column of B is a linear combination of the columns of A.
  - Show that $\text{rank}B \leq \text{rank}A$.
  - Show that $\text{rank}(A+B) \leq \text{rank}A$.