REMINDERS:

Collaboration is allowed (and even encouraged) when working on homework problems. However, each student must write-up and submit an independent solution in his/her own words. Solutions should clearly indicate any collaborators, by listing names. For example, “Collaborators with George P. Burdell on Assignment 1: Cal Q. Luss and Allie Gebra.”

Assignments must be neatly and clearly written in complete, correct English sentences. Homework must be written on the front side of the page only, and multiple pages must be stapled together. Illegible and/or unintelligible solutions will receive no credit.

Homework is due at the beginning of class and late homework will not be accepted.

1. Section 4.16 # 11. Hint: Let $B_1 = \begin{pmatrix} 1 & 0 \\ 0 & 0 \end{pmatrix}$, $B_2 = \begin{pmatrix} 0 & 1 \\ 0 & 0 \end{pmatrix}$, $B_3 = \begin{pmatrix} 0 & 0 \\ 1 & 0 \end{pmatrix}$, and $B_4 = \begin{pmatrix} 0 & 0 \\ 0 & 1 \end{pmatrix}$.

2. Section 4.20 # 9.

3. Section 4.21 # 2. Clearly state whether the statement is “true” or "false". Also, counter-examples should be for an arbitrary $n$, not a particular integer value.

4. Section 5.8 # 6.