MATH 3500(H)

PROBLEM SET #10

DUE Wednesday, October 29, 2014.

Problems to work but not hand in:

§4.3: #12, 14b, 19.

§4.4: #3f, 5b,c,e.

Problems to turn in:

WeBWork Homework 10

§4.3: #4 (3), 5 and 16 (3), 9 (3), 11* (3), 21 (4).

§4.4: #5a,d,f,g (4), 6† (3), 12 (3), 13 (4), 14 (2), 15 (3).

      A. (2) Suppose A is an $m \times n$ matrix of rank r and B is an $n \times p$ matrix. Suppose $AB = \mathsf{O}$. What is the largest rank B can have? Give a proof.

Challenge problems (Turn in separately):

§4.3: #20 (3), 24 (3), 26 (2), 27 (5).

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*#9 and #11 are extremely important.
†Make $A \neq \mathsf{O}$ in all cases.