# MAT 211: Intro Linear Algebra, L03, Spring 2023
## Homework Assignment 5

**WebAssign Problems due before 9am, Wednesday, 03/08**
20% bonus for submissions    **before 9am, Saturday, 03/04**

**Written Assignment due   before 4pm, Wednesday, 03/08** in Math 3-111
or handed in **before** the lecture on Wednesday, 03/08, in ESS 079

Please read Section 3.3 and the beginning of 3.5 before starting on the problem set
(ignore all binary/modular arithmetic stuff).

**Written Assignment:** 3.3 44,46; Problem A below
*Show your work; correct answers without explanation will receive no credit, unless noted otherwise*

*Please write your solutions legibly; the grader will disregard solutions that are not readily readable. All solutions must be stapled (no paper clips) and have your name (first name first) and HW number in the upper-right corner of the first page.*

## Problem A

Let $A$ be an $m \times n$ matrix and $B$ be an $n \times m$ matrix with $AB = I_m$ and $BA \neq I_n$.
(a) Explain why $m \neq n$ (you can reference something specific from the book).
(b) Given an example of $A$ and $B$ satisfying the above conditions.

$$\boxed{\textbf{NO late homework will be accepted}}$$

Once the instructor starts the lecture in which a homework assignment is due, he will no longer accept this assignment. Late homework will **not** be accepted under *any* circumstances; you will not receive a response to any email asking for an extension. If there is *any* chance of you arriving late to the class at which a homework is due or if you will be out of town when it is due, you can turn it in (give to the instructor or slip under the instructor's office door) any time before it is due (which you are always welcome to do). If something completely unexpected comes up, then you'll benefit from the *lowest homework score dropped* policy.