

## MATH 3A HOMEWORK 5

**DUE: Monday, Nov 21**

**READING ASSIGNMENT:** Read Sections 3.1, 3.2, 3.3.

### PROBLEMS FROM TEXTBOOK:

**Section 3.1:** 1, 9, 19, 20, 21, 33, 34

**Section 3.2:** 5, 11, 21, 24, 32, 33

**Section 3.3:** 22, 23, 27, 28, 31

### ADDITIONAL PROBLEMS:

True or False (justify your answer):

(a) For any two  $n \times n$  matrices  $A, B$ ,  $\det(A + B) = \det(A) + \det(B)$ .

(b) If  $\det(A) = 0$ , then  $A$  must have two rows or columns that are equal.

(c)  $\det(B^{-1}AB) = \det(A)$ .

(**Hint:** In some cases above, if your answer is false, then you should give a counterexample.)