

Math 31AH Fall 2017 Written Homework 8, due
Friday 12/1/2017 in HW box in the basement of
AP&M by 4 pm

1 Reading

Finish reading Section 7.5, and begin reading Sections 9.1 and 9.2. In Section 7.5, you are not responsible for proofs and examples that refer to the multivariable calculus we have not covered, namely Proposition 5.13 on page 314 and Corollary 5.19 on page 321.

2 Exercises to submit on Friday 12/1

Write out each answer as a careful proof, in full sentences.

Section 5.5: #17, 18

Section 7.5: #5, 12, 15, 17, 18, 19

Hint for 7.5 #18: If $i \neq j$, let B be the matrix obtained by replacing the i th row in A with a copy of the j th row. What is $\det B$? When you calculate $\det B$ by expanding by minors along the i th row, how is the result related to the (j, i) -entry of AC^T ?

3 Additional exercises from the text not to be handed in

These are some other good exercises from these sections if you want to think about more problems for your own practice. Do not hand these in.

Section 5.5: #19

Section 7.5: #6, 10, 11, 21