

Math 141 Homework 12: Final homework set
Due Thursday, April 28

Reading for this week and next:

GP section 3.1, 3.2, and 3.3 only up until the fundamental theorem of algebra.

You'll notice that there are no problems assigned from section 3.3. I will suggest some (easy ones) as review for the final exam. I do not expect you to be able to do anything sophisticated with the material from 3.3 for the final.

Problems to hand in

1. Do the following problems from GP section 3.2 # 2 (this is easy linear algebra!), 4 (see page 100 for the definition), 6, 7, 8, 9, 12. (note: you need to do problem 7 in order to do 8)
2. (a) Let $f : S^1 \rightarrow S^1$ be the antipodal map $x \mapsto -x$ (thinking of S^1 as the unit sphere in \mathbb{R}^2).
Is f orientation preserving or reversing?
(b) Repeat part a) for the antipodal map on S^2
(c) (Not to hand in) what about S^k ?