

Math 416: //DRAFT ONLY// HW 9 due Friday, November 11, 2022.

Webpage: <http://dunfield.info/416>

Office hours: Wednesday 2:30–3:30pm and Thursday 3:00–4:00pm; other times possible by appointment. My office is 378 Altgeld.

Problems:

1. Section 5.3 of [FIS], Problem 1 parts (c–j).
2. If using the 5th edition of [FIS], prove Theorem 5.14 on page 289 of and its two corollaries on page 290. *Check that one of those corollaries isn't actually on page 289.*
If using the 4th edition of [FIS], prove Theorem 5.15 on page 290 of and its two corollaries on page 291.
3. Prove that if a 1-dimensional subspace W of \mathbb{R}^n contains a nonzero vector with all nonnegative entries, then W contains a unique probability vector.
4. Section 5.3 of [FIS], Problem 7.
5. Section 6.1 of [FIS], Problem 3.
6. Section 6.1 of [FIS], Problem 8 parts (a) and (b).
7. Section 6.1 of [FIS], Problem 9.
8. Section 6.1 of [FIS], Problem 10 and Problem 15(a).