

Math 627 Homework #3, Fall 2022

Instructor: Ezra Miller

Solutions by: ...your name...

Collaborators: ...list those with whom you worked on this assignment...

Due: Thursday 13 October 2022

READING ASSIGNMENTS in [Vakil]

- by Thursday 29 September: Chapter 5 (should be mostly review of Math 602)
- by Tuesday 4 October: §11.1–11.3, §12.1–§12.3, §12-5; this plus Chapter 5 is a lot, but most of it is review of Math 602; skip anything concerning morphisms of schemes
- by Thursday 6 October: §6.1–§6.3
- by Thursday 13 October: The rest of Chapter 6
- by Thursday 20 October: §7.1 and §7.3; review §7.2

EXERCISES: In [Vakil], exercises have labels C.S.N, for “Chapter C, Section S, Exercise N”, where $C, S \in \mathbb{Z}_+$ and $N \in \mathbb{A}, \dots, \mathbb{Z}$. Exercises marked “[essential]” are essential.

4.5.E (a) [essential—and it’s not that tricky]

(b)

4.5.F

4.5.I

4.5.N [essential]

5.1.B [essential]

5.1.F [essential]

5.2.C

5.2.E

5.3.B

5.3.C

5.3.F [essential]

5.4.H (a)

(b)

5.5.C

6.2.E [essential]

6.3.E [essential]

6.3.F [essential]

6.3.K

References

[Vakil] Ravi Vakil, *The Rising Sea: Foundations of Algebraic Geometry*, November 18, 2017