

Homework exercises for lectures #8–9

1. (Milne Exercise II.3.7, p. 72) Compare the constant sheaf on X with the pushforward of the constant sheaf on the generic point X_η when (i) X is normal, (ii) X is a nodal curve, and (iii) X is any integral scheme.
2. (Milne Exercise II.3.22b, pp. 80-81) Define π_* and π^* for sheaves of sets and show that their restriction to sheaves of abelian groups coincide with the ones defined for abelian groups when finite inverse limits exist.