

Math 307 Homework
October 9, 2015

1. Suppose that $\mathbf{T} \in \mathcal{L}(V)$ is invertible, \mathcal{B} is a basis of V , and $[\mathbf{T}]_{\mathcal{B}} = \mathbf{diag}(\lambda_1, \dots, \lambda_n)$. What is $[\mathbf{T}^{-1}]_{\mathcal{B}}$?
2. Let $\mathcal{B}_1, \mathcal{B}_2$ be bases for a vector space V . Show that $[I]_{\mathcal{B}_1, \mathcal{B}_2}$ is an invertible matrix and find its inverse.