

Read the first three pages of Appendix E, then read Section 7.3.

Let $T: V \rightarrow V$ be a linear operator on a finite-dimensional vector space over a field \mathbb{F} .

1. What is the minimal polynomial of T ?
2. How does the minimal polynomial of T relate to the characteristic polynomial of T ?
3. Suppose V is a T -cyclic subspace of itself. Find the minimal polynomial of T .
4. What must be true about the minimal polynomial of a diagonalizable operator?