

For each term below, give a precise definition.

1. (3 pts) Let F be a field. Define a **field extension** of F .

2. (3 pts) Let E be a field extension of F and let $\alpha \in E$. Define **the minimal polynomial of α over F** .

(More on other side.)

3. (2 pts) Let E be a field extension of F . What does it mean to say that E **is an algebraic extension of F** .

4. (2 pts) Let E be a field extension of F . Define the **degree of E over F** , which we have been denoting $[E : F]$