

Worksheet 22

Let F be a field.

1. Finish the proof of the Division Algorithm for $F[x]$. You can skip uniqueness if you want.
2. In $F[x]$, define *divides* and gcd. Are gcds unique?
3. State the analogy of the Euclidean Algorithm in $F[x]$. Give an outline of the proof—just the outline, no details! I would personally do this with 4 steps, but your answer may differ.