

Quiz 16A.

R is a commutative ring. x is indeterminate (variable).

$$R[x] = \left\{ \sum_{i=0}^n a_i x^i \mid n \in \mathbb{N}, a_i \in R \right\}.$$

1. When are two elements $f(x), g(x) \in R[x]$ equal?

2. If R is an integral domain, then $R[x]$ is _____.

3. Show that $2x+1$ is a unit in $\mathbb{Z}_4[x]$.