Factorization Techniques

The goal of this lecture is to factor (or check for factors) of polynomials

> **Proposition 14.1**
>
> Let F be a field and $p(X) \in F[X]$ a polynomial.
> $p(X)$ has a factor of degree one in $F[X]$ *iff* $p(X)$ has a root in F, i.e $\exists \alpha \in F, \, p(\alpha) = 0$.

Proof.
$\Longrightarrow$
$\Longleftarrow$

$\blacksquare$