A Book of Abstract Algebra | (2nd Edition)

Chapter 31, Problem 2EF

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Problem

Let F be a field. An irreducible polynomial $p(x)$ in $F[x]$ is said to be *separable* over F if it has no multiple roots in any extension of F. If $p(x)$ does have a multiple root in some extension, it is *inseparable* over F.

If $a'(x) = 0$, prove that the only nonzero terms of $a(x)$ are of the form $a_{mp}x^{mp}$ for some m. [In other words, $a(x)$ is a polynomial in powers of x^p.]

Step-by-step solution

There is no solution to this problem yet.

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