A Book of Abstract Algebra | (2nd Edition)

Problem

Suppose $F \subseteq K$, where K is a normal extension of F. (This means simply that K is the root field of some polynomial in $F[x]$: see Chapter 31, Exercise K.) Let $I_1 \subseteq I_2$ be intermediate fields.

Use part 2 to prove that $hI^* h^{-1} = h(I)^*$.

Two intermediate fields I_1 and I_2 are called *conjugate* iff there is an automorphism [i.e., an element $i \in Gal(K : F)$] such that $i(I_1) = I_2$.

Step-by-step solution

There is no solution to this problem yet.

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