

Re: Algebra with finite field..

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On 05-02-2008 15:23, Fatal wrote:

I can't understand (***)part.
Namely, $a^p = a$, $b^p = b$.
Why ?

This is false in general.

Indeed, if it were true, every element of F would be a root of the polynomial $X^p - X$, thus the cardinality of F should be p : this is not the case if $n > 1$.

On the other hand, it is true if the hypothesis " F is a field of prime characteristic p " is replaced by the stronger hypothesis " F is a field with p elements".

Best regards,

Jose Carlos Santos

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