PÓLYA FIELDS, PÓLYA GROUPS AND PÓLYA EXTENSIONS: A QUESTION OF CAPITULATION

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The embedding problem is well known: is every number field contained in a field with class number one? We consider an analogous question with a weaker conclusion: is every number field contained in a Pólya field? A Pólya field is a number field where all the products of same norm prime ideals are principal ideals. It would be explained how the Hilbert class field gives a positive answer to this question. By the way, with respect to the capitulation of these products, we introduce and study the notion of a Pólya extension.

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