THE UNITS OF CHARACTER FIELDS AND THE CENTRAL UNITS OF INTEGER GROUP RINGS OF FINITE GROUPS

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The article is devoted to studying the relations between the units of character fields and the central units of integer group rings. It is shown that some power of a unit of a character field always results in a central unit (Theorem 1). To determine this power, the exponent is found of the unit group of the quotient ring of the integer ring of an abelian field by a power of a prime ideal (Theorem 2), and this exponent is used to answer the question 12.1.b in the "Kourovka Notebook" (Theorem 3).

Key words and phrases: character of a finite group, abelian field, unit of an integer group ring.

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