

1136-20-394

Alexandre Turull*, Department of Mathematics, University of Florida, Gainesville, FL 32611.

Calculating the Brauer invariant of an irreducible character of a finite group. Preliminary report.

Suppose that χ is an irreducible character of a finite group G , and that the values of χ are all in some finite extension F of the field of p -adic numbers for some prime p . Then χ determines uniquely an element b of the Brauer group of F . As is well known, b is canonically characterized by an element $f \in \mathbf{Q}/\mathbf{Z}$, the quotient of the additive group of the rational numbers by the additive group of the integers. This element is called the *invariant* of b , so we also call it, the *invariant* of χ . If we represent f by an element $n/m \in \mathbf{Q}$ such that $0 \leq n/m < 1$, $m > 0$, and m is as small as possible, then it is known that m is the Schur index of χ over F . We will discuss some methods to calculate the invariant (including both numerator and denominator) of χ explicitly. (Received January 20, 2018)