

Primitive idempotents and group codes

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We present some algorithms to construct minimal left group codes for a large class of groups and fields based on the computation of primitive idempotents in semisimple finite group algebras. We start by describing some recent methods to compute complete sets of orthogonal primitive idempotents in each Wedderburn component of a semisimple group algebra FG for various classes of finite groups G and F being the field of rational numbers or a finite field.

The methods to construct minimal left group codes were implemented using the programming language provided by the computer algebra system GAP and we included them in the GAP package Wedderga [?].

References

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