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## Primitive central idempotents of finite group rings of symmetric groups

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Let  $p$  be a prime,  $F$  a field of characteristic  $p$  and let  $S_n$  denote the symmetric group of degree  $n$ . We describe a method to compute the primitive central idempotents of the group ring  $FG$ , where  $G$  is a finite group. For symmetric groups we can prove some theoretical results about the idempotents and the group ring  $FS_n$ , which can be used to speed up the computation. Thus it is possible to compute the primitive central idempotents of  $\mathbb{F}_2S_n$  for  $n \leq 50$ .