

1125-05-1720 **Sheila Sundaram*** (shsund@comcast.net). *On conjugacy classes of S_n containing all irreducibles.* Preliminary report.

We show that for the conjugation action of the symmetric group S_n , when $n = 6$ or $n \geq 8$, all S_n -irreducibles appear as constituents of a single conjugacy class, namely, one indexed by a partition λ of n with at least two parts, whose parts are all distinct and taken from the set of odd primes and 1. We investigate a sequence of representations W_n defined as a multiplicity-free sum of every S_n -irreducible except two: namely, those indexed by $(n - 1, 1)$ and $(2, 1^{n-2})$. We describe precisely when the induced outer tensor products of these representations contain all irreducibles. (Received September 19, 2016)