Physics 711, Symmetry Problems in Physics Fall 2005

Homework: Assignment 2

Due 9/26/05

Georgi, 1D.

Consider the group of the integers $1, 2, \cdots, n-1$ under multiplication, mod n, where n is prime. Use this group and what we have learned about finite groups to prove that $k^{n-1} = 1$, mod n, for $1 \leq k \leq n-1$.

Construct the normalized character table of the group S_3. Label the rows by the irreducible representation and the columns by the conjugacy class.