

PermutationConjugation[ $a$ ,  $g$ ] gives the  
conjugation of the permutations  $a$  and  $g$  by evaluating  $gag^{-1}$

```
PermutationConjugation[a_List, g_List] :=  
  PermutationConjugation[a, g] =  
    PermutationProduct[g, a, InversePermutation@g];
```