Let *C(a)* be the conjugacy class in *G* containing *a*. Show that for a group *G*, if $a\in G$ and $f:G\rightarrow G$ is an automorphism, then $b\in C(a)$ if and only if $f(b)\in C(f\left(a\right))$. Conclude that *Aut G* acts on the set of conjugacy classes of G.