
JOY MORRIS, University of Lethbridge
The isomorphism problem for Cayley graphs

It is easy to see that if α is an automorphism of the group G , then the Cayley graph $\text{Cay}(G; S)$ is isomorphic to the Cayley graph $\text{Cay}(G; \alpha(S))$.

A group G has the CI-property if this is the only way to obtain two Cayley graphs on G that are isomorphic. More precisely, G has the CI-property if whenever $\text{Cay}(G; S)$ is isomorphic to $\text{Cay}(G; T)$, there is a group automorphism β of G , such that $\beta(S) = T$. The CI-problem is the problem of determining which groups have the CI-property.

I will present an overview of the CI-problem, including some recent developments and open problems.