

An application of Fröhlich's Hom Description

Fröhlich's Hom Description is a powerful tool providing an isomorphism between the locally free class group of an order and a quotient of certain groups of homomorphisms. This useful technique was introduced by A. Fröhlich in 1975 and though it might seem slightly abstract and complicated, it yields a number of interesting consequences. A case in point, is an indirect proof of Fröhlich's conjecture, a surprising link between the Artin root number of a certain order 2 character of the group H_8 and the order of the ring of integers related to a quaternion extension over the rational field. I shall briefly introduce Fröhlich's Description, giving the necessary definitions, and explain how it can be used to prove Fröhlich's conjecture.