

## 0.1 Cayley's theorem

Cayley's theorem states that every group  $G$  is isomorphic to a subgroup of the symmetric group acting on  $G$ .

Multiplication by a member of  $G$  is a bijective function, as for each  $g$  there is also a  $g^{-1}$ .

This means that multiplication of each member of  $G$  is a permutation, and so is a subset of the symmetric group on  $G$ .