

# Free Group Actions on Products of Spheres

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Every finite group  $G$  can act freely on a product of spheres. Hence given a finite group  $G$  we could define  $n(G)$  as the minimum integer  $n$  such that  $G$  acts freely on a product of  $n$  spheres. In this talk, I will first discuss some known lower bounds on  $n(G)$  in terms of subgroup data for  $G$ . Then I will give a list of methods for constructing free group actions on products of spheres. Finally I will discuss how one can use these methods to obtain some upper bounds on  $n(G)$ .