

HOMEWORK 2 - DUE TUES. FEB. 8

- 1.) If G and H are groups, prove that $G \times H$ is a group. $G \times H$ is the set of pairs (g, h) where $g \in G$, $h \in H$.
- 2.) Find the remainder when 10^{24} is divided by 7.
- 3.) Describe all subgroups of the group $\mathbb{Z}/n\mathbb{Z}$. (Hint: look at the factors of n).
- 4.) What is the order of the group of symmetries of the cube? Is it abelian?