DRP WEEK 3: GROUP ACTIONS

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Let G be a group and X be a set.

Question 1. What is a group action of G on X? We write this as $G \circlearrowright X$.

Question 2. Define the dihedral group D_n. This is sometimes confusingly written as D_{2n}.

Question 3. What does the dihedral group act on?[1]

Question 4. Give me a collection of generators of the dihedral group.

Question 5. Define the symmetric group S_n. This is written as all sorts of things: Σ_n, $\mathfrak{S}_n$, ...

Question 6. What does the symmetric group act on?[2]

Question 7. Give me a collection of generators of the symmetric group.

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[1]As you probably learned when you looked up the dihedral group, this is the whole point of defining it!

[2]As you probbaly learned when you looked up the symmetric group, this is the whole point of defining it!