

Modern Algebra I: Class Activities

Tuesday, March 5th

Task 1

Recall the even/odd group from last class. Can you find anything like evens and odds in D_4 ? Justify your assertion.

Task 2

Do these "even" and "odd" subsets form a two-element group? Construct an operation table to support your assertion.

Task 3

It looks like in these groups we are multiplying sets. How exactly do we do that? Write a definition of subset multiplication.

Task 4

When we broke D_4 into Even/Odd subsets we formed groups of two elements. Can we make bigger groups by breaking D_4 into smaller pieces? Make as many four-element groups as you can by breaking D_8 into two-element subsets. Create operation tables for each one to prove that it is indeed a group.