

**Fall 2023, Math 320: Preliminary Problem Set 14**  
**Due: Thursday, November 30th, 2023**  
**Introduction to Groups**

**Preliminary problems.** These problems should be completed before discussion on Thursday.

- (P1) Illustrate the elements of  $D_3$ , the symmetries of a triangle with vertices labeled 1, 2, 3 (there should be 6 in total: 2 rotations, 3 flips, and the identity).