October 16, 2019

18.701 Problem Set 6

This assignment is due Wednesday October 23.

1. Chapter 6, Exercise 5.8 (b). *(frieze patterns)*

I recommend that you begin by drawing some frieze patterns with different symmetries. Then, base your classification on the possible point groups. Be careful: The formula for an element of the group depends on the choice of origin. Please lay out your work clearly, separating the various cases. For example, if the point group $\overline{G}$ contains the reflection $\overline{r}$ about the x-axis, G will contain glides with the x-axis as glide line. It may contain the reflection r or not.

2. Chapter 6, Exercise 11.1. (*operations of S_3 on a set of* 4.

Let's agree to call two operations that differ by a permutation of the set of 4 equivalent. I recommend starting your analysis by listing the partitions of a set of 4.