## Math 722: Algebraic Topology Problem Set #4 Due Wednesday, March 21

- 1. p. 79, #1
- 2. p. 79, #5
- 3. p. 79, #10
- 4. p. 80, #13
- 5. Find the group of deck transformations for each of the covering spaces (1), (2), (3), (5) (9), (11) and (13) of  $S^1 \vee S^1$  on page 58.
- 6. \* Just for fun! (extra credit) p. 79 #6. Make sure to first check that the picture drawn is a covering space of X.