

Disco I Worksheet #3

September 11, 1998- Professor Broughton

Name: _____

Box #: _____

1. Composing Ri- e Shu- es

1. Shu- e an eight card deck with a $\frac{1}{2}_{3;5;i}$ shu- e and follow this with $\frac{1}{2}_{5;3;i}$:
Write down the list notation and the cycle notation for both of these shu- es
and the composition or product $\frac{1}{2}_{3;5;i} \frac{1}{2}_{5;3;i}$:

2. Composing TIAR shu- es.

2. In groups, work out the list and cycle notation for the shu- es $\zeta_{4;8}$; $\zeta_{5;8}$;
 $\zeta_{4;8}\zeta_{5;8}$ and $\zeta_{5;8}\zeta_{4;8}$. Is permutation multiplication commutative?

3. Write out in words how you would multiply two permutations.

4. Repeat let $\zeta = \zeta_{4;8}$: Repeat ζ three times, i.e., compute $\zeta^3 = \zeta\zeta\zeta$: