

# Disco I - WorkSheet 6

September 29, 1998- Professor Broughton

Name:\_\_\_\_\_

Box #:\_\_\_\_\_

## 1. Transition matrices for Cayley Graphs

1. Draw the Cayley graph for  $TIAR_3$ : Indicate the probabilities.

ABC	CAB	BCA
ACB	BAC	CBA

2. Compute the transition matrix for the above diagram. Compute the deck distribution after 1, 2, and 3 shuffles.

## 2. Transition matrices for card shu- e diagrams.

3. Draw the card shu- e diagram for the  $\mathbb{R} = (1; 2); \bar{\phantom{x}} = (1; 2; 3; 4)$ . Indicate the probabilities. Compute the transition matrix and determine the distribution of each of the 4 cards after 3 shu- es.

4. Do the same as question 3 for  $\text{TIAR}_4$ :