Compile and Run Instructions (taken directly from README.md)

First compile the main class

Then, run the program and provide a seed to use for random number generation (to ensure a predictable outcome)

If no seed is provided, the program will use a random device to ensure a random outcome.

The program will print information about the game to the screen, as well as save information in a

log file named "log.txt".

Design and Implementation

The main.cpp file contains all the code for the project.

First, I have several global constant variables for the number of suits in the deck, number of ranks in the deck, number of players, and number of rounds to use in the game. These allow for any of these values to be changed without having to look for hard-coded values in the code. Next is a struct for a random number generator that simplifies random number generation everywhere else in the code, and a struct that is used to pass multiple parameters to the player function using pthread_create(). After that are several functions responsible for various things involving the deck: creation, shuffling, and printing. Then all the global data structures, mutexes, and condition variables needed for the synchronization of the dealer and players. Lastly are the dealer and player functions and the main function that starts everything up.

Main

The main function obtains the random number generation seed from the command line, initializes the necessary data structures, mutexes, and condition variables, then creates the dealer thread and all player threads and waits for them to join after finishing the game.

Dealer

The dealer function controls the overall flow of the game through synchronized communication with every player. First, the dealer extracts the random number generator from the argument passed in, then enters a loop that cycles once for each round specified in the global variable NUM ROUNDS. Inside this loop, the dealer...

- 1. Waits for the players to be ready in case the dealer thread was created before one or more players,
- 2. Sets the players to not ready so the dealer can wait on them again next round,

- 3. Shuffles the deck.
- 4. Deals one card to each player,
- 5. Resets the data structure indicating whose turn it is,
- 6. Signals the start of play,
- 7. Signals one of the players that it is their turn to begin a round, and finally
- 8. Waits for the players to be done with the round.

After all rounds have been played, the dealer exits this loop to wait on the players to be ready again (this time for the end of the game), then sets a flag and wakes the players up so they can see the game is finished and exit. Then the dealer exits.

Player

The player function is used in multiple threads to allow several players to all play the game. The players communicate with the dealer and with each other to play until somebody wins, and stop when all rounds are over. The player first extracts the random number generator and player index from the argument passed in, then signals they are ready for the first round and enters a loop that continues until the game ends. Inside this loop, the player...

- 1. Waits for their turn,
- 2. Once it's their turn, the player checks if play is allowed
 - a. If not, then the end of a round has just occured, so the player discards their hand back into the deck, wakes up the next player to do the same, and signals the dealer that they are ready for the next round and waits for it to begin, continuing to the top of the outer loop when it is.
 - b. If play is allowed, they continue to (3).
- 3. Checks if the game is finished,
 - a. If the game is finished, they break out of the loop and go to (6).
 - b. If the game is not finished, they continue to (4).
- 4. Draws a card.
- 5. Checks if the card they drew matches the card in their hand
 - a. If it matches, the player wins so they discard their cards, and stops play.
 - b. If it doesn't match, they discard a card at random and signal the next player that it is their turn.
- 6. Once the game is finished, the player signals the next player to wake up and observe that the game is finished.
- 7. Exits.

Five Runs with Different Seeds

The log file output is given below and also included in the zip file in the runs/ folder. Screen output is not included or shown because the information is the same as what is saved to the log file. The format of the screen output can be checked by simply running the program.

```
Run 1 (seed = 0)
DEALER : shuffle (round 1 / 3)
      : 4 9 11 4 11 0 8 11 5 8 7 10 8 6 5 12 2 11 1 7 5 5
0 8 9 3 2 0 6 1 0 3 12 6 3 2 3 4 10 10 12 2 7 6 9 7 9 10
PLAYER 1: hand 1
PLAYER 1: draws 4
PLAYER 1: discards 1
      : 9 11 4 11 0 8 11 5 8 7 10 8 6 5 12 2 11 1 7 5 5
8 9 3 2 0 6 1 0 3 12 6 3 2 3 4 10 10 12 2 7 6 9 7 9 10 4
PLAYER 2: hand 12
PLAYER 2: draws 9
PLAYER 2: discards 12
    : 11 4 11 0 8 11 5 8 7 10 8 6 5 12 2 11 1 7 5 5
9 3 2 0 6 1 0 3 12 6 3 2 3 4 10 10 12 2 7 6 9 7 9 10 4 1
12
PLAYER 3: hand 1
PLAYER 3: draws 11
PLAYER 3: discards 11
      : 4 11 0 8 11 5 8 7 10 8 6 5 12 2 11 1 7 5 5 0 8 9
3 2 0 6 1 0 3 12 6 3 2 3 4 10 10 12 2 7 6 9 7 9 10 4 1 12
11
PLAYER 1: hand 4
PLAYER 1: draws 4
PLAYER 1: hand 4 4
PLAYER 1: wins
PLAYER 1: round completed
PLAYER 2: round completed
PLAYER 3: round completed
DEALER : shuffle (round 2 / 3)
     : 6 7 4 12 8 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6
12 4 9 2 9 10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4
PLAYER 2: hand 12
PLAYER 2: draws 6
PLAYER 2: discards 12
```

```
DECK : 7 4 12 8 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12
4 9 2 9 10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2
12
PLAYER 3: hand 5
PLAYER 3: draws 7
PLAYER 3: discards 5
    : 4 12 8 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4
9 2 9 10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12
5
PLAYER 1: hand 7
PLAYER 1: draws 4
PLAYER 1: discards 4
    : 12 8 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9
2 9 10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5
PLAYER 2: hand 6
PLAYER 2: draws 12
PLAYER 2: discards 12
     : 8 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2
9 10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4
12
PLAYER 3: hand 7
PLAYER 3: draws 8
PLAYER 3: discards 8
DECK : 1 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9
10 5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12
8
PLAYER 1: hand 7
PLAYER 1: draws 1
PLAYER 1: discards 1
     : 1 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9 10
5 11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12 8
PLAYER 2: hand 6
PLAYER 2: draws 1
PLAYER 2: discards 1
    : 8 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9 10 5
11 3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12 8 1
PLAYER 3: hand 7
PLAYER 3: draws 8
PLAYER 3: discards 7
```

```
: 10 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9 10 5 11
3 0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12 8 1 1
7
PLAYER 1: hand 7
PLAYER 1: draws 10
PLAYER 1: discards 7
      : 0 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9 10 5 11 3
0 11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12 8 1 1 7
7
PLAYER 2: hand 6
PLAYER 2: draws 0
PLAYER 2: discards 0
     : 8 3 8 4 3 9 7 0 0 10 12 6 12 4 9 2 9 10 5 11 3 0
11 11 11 2 1 5 2 10 7 1 5 6 6 9 3 4 2 12 5 4 12 8 1 1 7 7
PLAYER 3: hand 8
PLAYER 3: draws 8
PLAYER 3: hand 8 8
PLAYER 3: wins
PLAYER 3: round completed
PLAYER 1: round completed
PLAYER 2: round completed
DEALER : shuffle (round 3 / 3)
      : 10 4 8 6 6 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9
1 12 12 9 7 2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10
PLAYER 3: hand 8
PLAYER 3: draws 10
PLAYER 3: discards 10
      : 4 8 6 6 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1
12 12 9 7 2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3
10
PLAYER 1: hand 8
PLAYER 1: draws 4
PLAYER 1: discards 4
      : 8 6 6 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12
12 9 7 2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10
PLAYER 2: hand 7
PLAYER 2: draws 8
PLAYER 2: discards 8
```

```
: 6 6 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12 12
9 7 2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10 4
PLAYER 3: hand 8
PLAYER 3: draws 6
PLAYER 3: discards 6
    : 6 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12 12 9
7 2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10 4 8
PLAYER 1: hand 8
PLAYER 1: draws 6
PLAYER 1: discards 8
    : 5 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12 12 9 7
2 7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10 4 8 6
PLAYER 2: hand 7
PLAYER 2: draws 5
PLAYER 2: discards 5
      : 2 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12 12 9 7 2
7 8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10 4 8 6 8
5
PLAYER 3: hand 8
PLAYER 3: draws 2
PLAYER 3: discards 8
    : 6 1 0 10 2 9 0 12 5 5 6 11 2 3 9 1 12 12 9 7 2 7
8 4 10 9 4 1 11 0 5 11 12 1 3 4 7 11 3 0 10 3 10 4 8 6 8 5
8
PLAYER 1: hand 6
PLAYER 1: draws 6
PLAYER 1: hand 6 6
PLAYER 1: wins
PLAYER 1: round completed
PLAYER 2: round completed
PLAYER 3: round completed
PLAYER 2: game finished
PLAYER 1: game finished
PLAYER 3: game finished
Run 2 (seed = 1)
DEALER : shuffle (round 1 / 3)
DECK : 7 11 4 6 2 4 9 9 7 5 3 1 2 2 1 11 10 4 10 11 3 7
1 9 0 0 9 5 8 12 12 1 11 8 0 6 3 12 3 6 4 8 12 5 5 2 0 6
8
```

PLAYER 2: hand 2

```
PLAYER 2: draws 9
PLAYER 2: discards 9
     : 7 5 3 1 2 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12
12 1 11 8 0 6 3 12 3 6 4 8 12 5 5 2 0 6 8 10 11 4 7 7 10 9
PLAYER 3: hand 4
PLAYER 3: draws 7
PLAYER 3: discards 4
     : 5 3 1 2 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12 12
1 11 8 0 6 3 12 3 6 4 8 12 5 5 2 0 6 8 10 11 4 7 7 10 9 9
PLAYER 1: hand 6
PLAYER 1: draws 5
PLAYER 1: discards 5
     : 3 1 2 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12 12 1
11 8 0 6 3 12 3 6 4 8 12 5 5 2 0 6 8 10 11 4 7 7 10 9 9 4
5
PLAYER 2: hand 2
PLAYER 2: draws 3
PLAYER 2: discards 3
    : 1 2 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12 12 1 11
8 0 6 3 12 3 6 4 8 12 5 5 2 0 6 8 10 11 4 7 7 10 9 9 4 5
3
PLAYER 3: hand 7
PLAYER 3: draws 1
PLAYER 3: discards 7
    : 2 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12 12 1 11 8
0 6 3 12 3 6 4 8 12 5 5 2 0 6 8 10 11 4 7 7 10 9 9 4 5 3
PLAYER 1: hand 6
PLAYER 1: draws 2
PLAYER 1: discards 2
     : 2 1 11 10 4 10 11 3 7 1 9 0 0 9 5 8 12 12 1 11 8 0
2
PLAYER 2: hand 2
PLAYER 2: draws 2
PLAYER 2: hand 2 2
PLAYER 2: wins
PLAYER 2: round completed
PLAYER 3: round completed
PLAYER 1: round completed
DEALER : shuffle (round 2 / 3)
```

```
DECK : 6 9 8 2 4 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12
0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10
PLAYER 2: hand 5
PLAYER 2: draws 6
PLAYER 2: discards 6
     : 9 8 2 4 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0
5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5
6
PLAYER 3: hand 11
PLAYER 3: draws 9
PLAYER 3: discards 11
    : 8 2 4 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5
10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6
11
PLAYER 1: hand 6
PLAYER 1: draws 8
PLAYER 1: discards 8
     : 2 4 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10
3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11
8
PLAYER 2: hand 5
PLAYER 2: draws 2
PLAYER 2: discards 5
    : 4 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3
9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8
5
PLAYER 3: hand 9
PLAYER 3: draws 4
PLAYER 3: discards 4
DECK : 8 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9
5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5
PLAYER 1: hand 6
PLAYER 1: draws 8
PLAYER 1: discards 8
    : 7 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5
3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4
PLAYER 2: hand 2
PLAYER 2: draws 7
```

PLAYER 2: discards 7

```
DECK : 4 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3
2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8
7
PLAYER 3: hand 9
PLAYER 3: draws 4
PLAYER 3: discards 9
DECK : 10 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2
10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7
PLAYER 1: hand 6
PLAYER 1: draws 10
PLAYER 1: discards 6
    : 4 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10
7 \quad 1 \quad 4 \quad 1 \quad 2 \quad 0 \quad 12 \quad 3 \quad 11 \quad 8 \quad 6 \quad 2 \quad 9 \quad 0 \quad 1 \quad 12 \quad 10 \quad 5 \quad 6 \quad 11 \quad 8 \quad 5 \quad 4 \quad 8 \quad 7 \quad 9
PLAYER 2: hand 2
PLAYER 2: draws 4
PLAYER 2: discards 2
      : 12 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7
1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6
2
PLAYER 3: hand 4
PLAYER 3: draws 12
PLAYER 3: discards 12
    : 1 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1
4 1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2
12
PLAYER 1: hand 10
PLAYER 1: draws 1
PLAYER 1: discards 1
DECK : 7 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4
1 2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12
PLAYER 2: hand 4
PLAYER 2: draws 7
PLAYER 2: discards 7
    : 11 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1
2 0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1
PLAYER 3: hand 4
PLAYER 3: draws 11
```

PLAYER 3: discards 4

```
DECK : 11 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2
0 12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7
PLAYER 1: hand 10
PLAYER 1: draws 11
PLAYER 1: discards 10
    : 6 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0
12 3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4
10
PLAYER 2: hand 4
PLAYER 2: draws 6
PLAYER 2: discards 4
    : 7 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12
3 11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10
PLAYER 3: hand 11
PLAYER 3: draws 7
PLAYER 3: discards 11
     : 9 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3
11 8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4
11
PLAYER 1: hand 11
PLAYER 1: draws 9
PLAYER 1: discards 11
    : 0 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11
8 6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11
11
PLAYER 2: hand 6
PLAYER 2: draws 0
PLAYER 2: discards 0
     : 3 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8
6 2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11
PLAYER 3: hand 7
PLAYER 3: draws 3
PLAYER 3: discards 3
    : 8 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6
2 9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0
PLAYER 1: hand 9
PLAYER 1: draws 8
PLAYER 1: discards 8
```

```
: 12 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2
9 0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3
PLAYER 2: hand 6
PLAYER 2: draws 12
PLAYER 2: discards 6
      : 0 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9
0 1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3 8
PLAYER 3: hand 7
PLAYER 3: draws 0
PLAYER 3: discards 0
     : 5 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0
1 12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3 8 6
PLAYER 1: hand 9
PLAYER 1: draws 5
PLAYER 1: discards 5
      : 10 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1
12 10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3 8 6 0
PLAYER 2: hand 12
PLAYER 2: draws 10
PLAYER 2: discards 10
     : 3 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12
10 5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3 8 6 0 5
10
PLAYER 3: hand 7
PLAYER 3: draws 3
PLAYER 3: discards 3
      : 9 5 3 2 10 7 1 4 1 2 0 12 3 11 8 6 2 9 0 1 12 10
5 6 11 8 5 4 8 7 9 6 2 12 1 7 4 10 4 11 11 0 3 8 6 0 5 10
PLAYER 1: hand 9
PLAYER 1: draws 9
PLAYER 1: hand 9 9
PLAYER 1: wins
PLAYER 1: round completed
PLAYER 2: round completed
PLAYER 3: round completed
DEALER : shuffle (round 3 / 3)
```

```
DECK : 11 3 4 10 4 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8
11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6
11
PLAYER 3: hand 7
PLAYER 3: draws 11
PLAYER 3: discards 11
    : 3 4 10 4 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11
7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11
11
PLAYER 1: hand 1
PLAYER 1: draws 3
PLAYER 1: discards 1
    : 4 10 4 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11 7
0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11
PLAYER 2: hand 10
PLAYER 2: draws 4
PLAYER 2: discards 4
     : 10 4 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11 7 0
5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1
4
PLAYER 3: hand 7
PLAYER 3: draws 10
PLAYER 3: discards 10
    : 4 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11 7 0 5
1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4
10
PLAYER 1: hand 3
PLAYER 1: draws 4
PLAYER 1: discards 3
     : 3 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11 7 0 5 1
12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10
PLAYER 2: hand 10
PLAYER 2: draws 3
PLAYER 2: discards 3
DECK : 12 2 0 9 7 11 6 5 7 1 8 6 10 8 0 8 11 7 0 5 1 12
12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10 3
PLAYER 3: hand 7
PLAYER 3: draws 12
PLAYER 3: discards 7
```

PLAYER 1: discards 7

```
DECK : 7 1 8 6 10 8 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4
12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12
7
PLAYER 2: hand 10
PLAYER 2: draws 7
PLAYER 2: discards 7
     : 1 8 6 10 8 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12
4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7
7
PLAYER 3: hand 6
PLAYER 3: draws 1
PLAYER 3: discards 6
    : 8 6 10 8 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4
6 \quad 2 \quad 9 \quad 8 \quad 10 \quad 9 \quad 9 \quad 1 \quad 3 \quad 6 \quad 11 \quad 11 \quad 1 \quad 4 \quad 10 \quad 3 \quad 3 \quad 7 \quad 4 \quad 0 \quad 9 \quad 2 \quad 11 \quad 12 \quad 7 \quad 7
PLAYER 1: hand 5
PLAYER 1: draws 8
PLAYER 1: discards 8
      : 610 8 0 811 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6
2 9 8 10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6
8
PLAYER 2: hand 10
PLAYER 2: draws 6
PLAYER 2: discards 10
     : 10 8 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2
9 8 10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8
10
PLAYER 3: hand 1
PLAYER 3: draws 10
PLAYER 3: discards 1
      : 8 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9
8 10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10
PLAYER 1: hand 5
PLAYER 1: draws 8
PLAYER 1: discards 5
    : 0 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8
10 9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1
PLAYER 2: hand 6
PLAYER 2: draws 0
PLAYER 2: discards 0
```

```
DECK : 8 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10
9 9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5
PLAYER 3: hand 10
PLAYER 3: draws 8
PLAYER 3: discards 10
    : 11 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9
9 1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0
10
PLAYER 1: hand 8
PLAYER 1: draws 11
PLAYER 1: discards 8
    : 7 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9
1 3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10
PLAYER 2: hand 6
PLAYER 2: draws 7
PLAYER 2: discards 6
     : 0 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1
3 6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8
PLAYER 3: hand 8
PLAYER 3: draws 0
PLAYER 3: discards 8
    : 5 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3
6 11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6
8
PLAYER 1: hand 11
PLAYER 1: draws 5
PLAYER 1: discards 5
     : 1 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6
11 11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8
PLAYER 2: hand 7
PLAYER 2: draws 1
PLAYER 2: discards 1
     : 12 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11
11 1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5
PLAYER 3: hand 0
PLAYER 3: draws 12
```

PLAYER 3: discards 12

```
: 12 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11
1 4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1
12
PLAYER 1: hand 11
PLAYER 1: draws 12
PLAYER 1: discards 11
      : 5 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1
4 10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1 12
11
PLAYER 2: hand 7
PLAYER 2: draws 5
PLAYER 2: discards 7
     : 3 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4
10 3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1 12 11
PLAYER 3: hand 0
PLAYER 3: draws 3
PLAYER 3: discards 3
     : 2 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10
3 3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1 12 11 7
3
PLAYER 1: hand 12
PLAYER 1: draws 2
PLAYER 1: discards 2
    : 2 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10 3
3 7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1 12 11 7 3
2
PLAYER 2: hand 5
PLAYER 2: draws 2
PLAYER 2: discards 5
     : 0 5 4 12 4 6 2 9 8 10 9 9 1 3 6 11 11 1 4 10 3 3
7 4 0 9 2 11 12 7 7 6 8 10 1 5 0 10 8 6 8 5 1 12 11 7 3 2
PLAYER 3: hand 0
PLAYER 3: draws 0
PLAYER 3: hand 0 0
PLAYER 3: wins
PLAYER 3: round completed
PLAYER 1: round completed
PLAYER 2: round completed
PLAYER 3: game finished
PLAYER 1: game finished
PLAYER 2: game finished
```

```
Run 3 (seed = 2)
DEALER : shuffle (round 1 / 3)
     : 4 8 11 9 3 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12
11 6 0 3 10 7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1
PLAYER 1: hand 5
PLAYER 1: draws 4
PLAYER 1: discards 5
      : 8 11 9 3 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12 11
6 0 3 10 7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1 5
PLAYER 2: hand 6
PLAYER 2: draws 8
PLAYER 2: discards 6
      : 11 9 3 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12 11 6
0 3 10 7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1 5 5
6
PLAYER 3: hand 4
PLAYER 3: draws 11
PLAYER 3: discards 11
     : 9 3 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12 11 6 0
3 10 7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1 5 5 6
11
PLAYER 1: hand 4
PLAYER 1: draws 9
PLAYER 1: discards 4
     : 3 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12 11 6 0 3
10 7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1 5 5 6 11
PLAYER 2: hand 8
PLAYER 2: draws 3
PLAYER 2: discards 8
     : 4 10 10 4 11 10 2 8 8 2 0 2 8 5 12 5 12 11 6 0 3 10
7 1 7 11 1 3 6 6 1 12 9 0 9 7 9 12 0 2 7 3 1 5 5 6 11 4
PLAYER 3: hand 4
PLAYER 3: draws 4
PLAYER 3: hand 4 4
PLAYER 3: wins
PLAYER 3: round completed
PLAYER 1: round completed
PLAYER 2: round completed
DEALER : shuffle (round 2 / 3)
```

```
DECK : 6 7 4 10 11 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8
7 3 8 12 3 4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1
7
PLAYER 2: hand 8
PLAYER 2: draws 6
PLAYER 2: discards 8
     : 7 4 10 11 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7
3 8 12 3 4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7
8
PLAYER 3: hand 12
PLAYER 3: draws 7
PLAYER 3: discards 7
    : 4 10 11 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7 3
8 12 3 4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7 8
7
PLAYER 1: hand 10
PLAYER 1: draws 4
PLAYER 1: discards 4
     : 10 11 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7 3 8
12 3 4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7 8 7
PLAYER 2: hand 6
PLAYER 2: draws 10
PLAYER 2: discards 10
    : 11 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7 3 8 12
3 4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7 8 7 4
10
PLAYER 3: hand 12
PLAYER 3: draws 11
PLAYER 3: discards 11
    : 1 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7 3 8 12 3
4 5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7 8 7 4 10
11
PLAYER 1: hand 10
PLAYER 1: draws 1
PLAYER 1: discards 1
    : 6 7 9 3 2 10 6 9 8 12 2 0 11 5 3 8 7 3 8 12 3 4
5 1 9 12 11 2 4 10 0 2 6 0 9 5 11 0 1 4 5 1 7 8 7 4 10 11
PLAYER 2: hand 6
PLAYER 2: draws 6
PLAYER 2: hand 6 6
PLAYER 2: wins
```

PLAYER 2: round completed PLAYER 3: round completed PLAYER 1: round completed

DEALER : shuffle (round 3 / 3)

DECK : 8 9 8 11 8 1 0 7 10 7 1 0 6 11 5 0 4 5 2 6 6 7 11 2 11 12 6 12 3 10 5 10 3 9 2 8 4 9 2 7 4 4 1 3 12 10 5 0 12

PLAYER 3: hand 1
PLAYER 3: draws 8
PLAYER 3: discards 8

DECK : 9 8 11 8 1 0 7 10 7 1 0 6 11 5 0 4 5 2 6 6 7 11 2 11 12 6 12 3 10 5 10 3 9 2 8 4 9 2 7 4 4 1 3 12 10 5 0 12 8

PLAYER 1: hand 9
PLAYER 1: draws 9
PLAYER 1: hand 9 9
PLAYER 1: wins

PLAYER 1: round completed
PLAYER 2: round completed
PLAYER 3: round completed
PLAYER 3: game finished
PLAYER 1: game finished

Run 4 (seed = 3)

DEALER: shuffle (round 1/3)

PLAYER 2: game finished

DECK : 0 11 6 3 4 5 2 11 4 9 0 8 3 10 5 8 12 5 7 3 7 4 6 10 12 6 9 7 9 0 1 12

4 1 2 8 8 10 9 2 11 2 11 5 0 7 6 10 12

PLAYER 1: hand 3
PLAYER 1: draws 0
PLAYER 1: discards 0

DECK : 11 6 3 4 5 2 11 4 9 0 8 3 10 5 8 12 5 7 3 7 4 6 10 12 6 9 7 9 0 1 12 4

1 2 8 8 10 9 2 11 2 11 5 0 7 6 10 12 0

PLAYER 2: hand 1
PLAYER 2: draws 11
PLAYER 2: discards 11

DECK : 6 3 4 5 2 11 4 9 0 8 3 10 5 8 12 5 7 3 7 4 6 10 12 6 9 7 9 0 1 12 4 1 2

8 8 10 9 2 11 2 11 5 0 7 6 10 12 0 11

PLAYER 3: hand 1
PLAYER 3: draws 6
PLAYER 3: discards 1

DECK : 3 4 5 2 11 4 9 0 8 3 10 5 8 12 5 7 3 7 4 6 10 12 6 9 7 9 0 1 12 4 1 2 8

8 10 9 2 11 2 11 5 0 7 6 10 12 0 11 1

PLAYER 1: hand 3
PLAYER 1: draws 3
PLAYER 1: hand 3 3
PLAYER 1: wins

PLAYER 1: round completed PLAYER 2: round completed PLAYER 3: round completed DEALER: shuffle (round 2 / 3)

DECK : 7 4 9 9 9 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11

4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11

PLAYER 2: hand 8
PLAYER 2: draws 7
PLAYER 2: discards 8

DECK : 4 9 9 9 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4

0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8

PLAYER 3: hand 7
PLAYER 3: draws 4
PLAYER 3: discards 4

DECK : 9 9 9 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0

12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4

PLAYER 1: hand 1
PLAYER 1: draws 9
PLAYER 1: discards 1

DECK : 9 9 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12

5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1

PLAYER 2: hand 7 PLAYER 2: draws 9 PLAYER 2: discards 7

DECK : 9 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5

8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7

PLAYER 3: hand 7
PLAYER 3: draws 9
PLAYER 3: discards 9

DECK : 10 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8

2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9

PLAYER 1: hand 9
PLAYER 1: draws 10
PLAYER 1: discards 9

DECK : 5 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2

10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9

PLAYER 2: hand 9 PLAYER 2: draws 5 PLAYER 2: discards 5 DECK : 3 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10

4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5

PLAYER 3: hand 7
PLAYER 3: draws 3
PLAYER 3: discards 7

DECK : 1 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4

6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7

PLAYER 1: hand 10 PLAYER 1: draws 1 PLAYER 1: discards 1

DECK : 3 2 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6

5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1

PLAYER 2: hand 9 PLAYER 2: draws 3 PLAYER 2: discards 9

DECK : 211 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5

12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9

PLAYER 3: hand 3
PLAYER 3: draws 2
PLAYER 3: discards 3

DECK : 11 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12

3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3

PLAYER 1: hand 10
PLAYER 1: draws 11
PLAYER 1: discards 10

DECK : 4 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3

9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10

PLAYER 2: hand 3
PLAYER 2: draws 4
PLAYER 2: discards 4

DECK : 6 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9

7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4

PLAYER 3: hand 2 PLAYER 3: draws 6 PLAYER 3: discards 6

DECK : 2 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7

0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6

PLAYER 1: hand 11
PLAYER 1: draws 2
PLAYER 1: discards 2

DECK : 1 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0

12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2

PLAYER 2: hand 3

PLAYER 2: draws 1
PLAYER 2: discards 1

DECK : 1 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12

11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1

PLAYER 3: hand 2
PLAYER 3: draws 1
PLAYER 3: discards 1

DECK : 8 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11

8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1

PLAYER 1: hand 11
PLAYER 1: draws 8
PLAYER 1: discards 11

DECK : 11 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8

4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11

PLAYER 2: hand 3
PLAYER 2: draws 11
PLAYER 2: discards 3

DECK : 7 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4

1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3

PLAYER 3: hand 2 PLAYER 3: draws 7 PLAYER 3: discards 2

DECK : 12 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1

7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2

PLAYER 1: hand 8
PLAYER 1: draws 12
PLAYER 1: discards 8

DECK : 10 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7

9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8

PLAYER 2: hand 11 PLAYER 2: draws 10 PLAYER 2: discards 10

DECK : 10 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9

9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10

PLAYER 3: hand 7
PLAYER 3: draws 10
PLAYER 3: discards 10

DECK : 2 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5

7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10

PLAYER 1: hand 12 PLAYER 1: draws 2 PLAYER 1: discards 2 DECK : 8 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7

1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2

PLAYER 2: hand 11 PLAYER 2: draws 8 PLAYER 2: discards 8

DECK : 0 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1

9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8

PLAYER 3: hand 7
PLAYER 3: draws 0
PLAYER 3: discards 0

DECK : 0 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9

3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0

PLAYER 1: hand 12 PLAYER 1: draws 0 PLAYER 1: discards 12

DECK : 6 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3

10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12

PLAYER 2: hand 11 PLAYER 2: draws 6 PLAYER 2: discards 6

DECK : 3 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3

10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6

PLAYER 3: hand 7
PLAYER 3: draws 3
PLAYER 3: discards 7

DECK : 5 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10

4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7

PLAYER 1: hand 0
PLAYER 1: draws 5
PLAYER 1: discards 5

DECK : 6 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4

6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5

PLAYER 2: hand 11
PLAYER 2: draws 6
PLAYER 2: discards 11

DECK : 11 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6

2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11

PLAYER 3: hand 3
PLAYER 3: draws 11
PLAYER 3: discards 11

DECK : 4 0 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1

1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11

PLAYER 1: hand 0

PLAYER 1: draws 4
PLAYER 1: discards 4

DECK : 0 1 2 5 8 2 1 0 4 6 5 1 2 3 9 7 0 1 2 1 1 8 4 1 7 9 9 5 7 1 9 3 1 0 4 6 2 1 1

11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4

PLAYER 2: hand 6
PLAYER 2: draws 0
PLAYER 2: discards 0

DECK : 12 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1

11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0

PLAYER 3: hand 3 PLAYER 3: draws 12 PLAYER 3: discards 3

DECK : 5 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3

2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3

PLAYER 1: hand 0 PLAYER 1: draws 5 PLAYER 1: discards 0

DECK : 8 2 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2

8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0

PLAYER 2: hand 6 PLAYER 2: draws 8 PLAYER 2: discards 6

DECK : 210 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8

10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6

PLAYER 3: hand 12 PLAYER 3: draws 2 PLAYER 3: discards 12

DECK : 10 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8

10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12

PLAYER 1: hand 5
PLAYER 1: draws 10
PLAYER 1: discards 5

DECK : 4 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10

10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5

PLAYER 2: hand 8
PLAYER 2: draws 4
PLAYER 2: discards 4

DECK : 6 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10

2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4

PLAYER 3: hand 2 PLAYER 3: draws 6 PLAYER 3: discards 2 DECK : 5 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2

8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2

PLAYER 1: hand 10 PLAYER 1: draws 5 PLAYER 1: discards 5

DECK : 12 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8

0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5

PLAYER 2: hand 8
PLAYER 2: draws 12
PLAYER 2: discards 12

DECK : 3 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0

12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12

PLAYER 3: hand 6
PLAYER 3: draws 3
PLAYER 3: discards 3

DECK : 9 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12

6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3

PLAYER 1: hand 10 PLAYER 1: draws 9 PLAYER 1: discards 9

DECK : 7 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6

7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9

PLAYER 2: hand 8
PLAYER 2: draws 7
PLAYER 2: discards 7

DECK : 0 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7

5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7

PLAYER 3: hand 6 PLAYER 3: draws 0 PLAYER 3: discards 6

DECK : 12 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5

11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6

PLAYER 1: hand 10 PLAYER 1: draws 12 PLAYER 1: discards 12

DECK : 11 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11

11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12

PLAYER 2: hand 8
PLAYER 2: draws 11
PLAYER 2: discards 11

DECK: 8 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11

4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11

PLAYER 3: hand 0

PLAYER 3: draws 8 PLAYER 3: discards 0

DECK : 4 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4

0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0

PLAYER 1: hand 10 PLAYER 1: draws 4 PLAYER 1: discards 10

DECK : 1 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0

3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10

PLAYER 2: hand 8
PLAYER 2: draws 1
PLAYER 2: discards 1

DECK : 7 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3

0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1

PLAYER 3: hand 8
PLAYER 3: draws 7
PLAYER 3: discards 8

DECK : 9 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0

6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8

PLAYER 1: hand 4
PLAYER 1: draws 9
PLAYER 1: discards 9

DECK : 9 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6

12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9

PLAYER 2: hand 8 PLAYER 2: draws 9 PLAYER 2: discards 9

DECK : 5 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12

5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9

PLAYER 3: hand 7
PLAYER 3: draws 5
PLAYER 3: discards 5

DECK : 7 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5

4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5

PLAYER 1: hand 4
PLAYER 1: draws 7
PLAYER 1: discards 7

DECK : 1 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4

2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7

PLAYER 2: hand 8
PLAYER 2: draws 1
PLAYER 2: discards 8

DECK : 9 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2

5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8

PLAYER 3: hand 7
PLAYER 3: draws 9
PLAYER 3: discards 7

DECK : 3 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5

12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7

PLAYER 1: hand 4 PLAYER 1: draws 3 PLAYER 1: discards 4

DECK : 10 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12

3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4

PLAYER 2: hand 1
PLAYER 2: draws 10
PLAYER 2: discards 10

DECK : 4 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3

9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10

PLAYER 3: hand 9 PLAYER 3: draws 4 PLAYER 3: discards 9

DECK : 6 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9

7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9

PLAYER 1: hand 3
PLAYER 1: draws 6
PLAYER 1: discards 3

DECK : 2 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7

6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3

PLAYER 2: hand 1
PLAYER 2: draws 2
PLAYER 2: discards 1

DECK : 1 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6

12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1

PLAYER 3: hand 4
PLAYER 3: draws 1
PLAYER 3: discards 1

DECK : 1 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12

11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1

PLAYER 1: hand 6
PLAYER 1: draws 1
PLAYER 1: discards 1

DECK : 11 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11

0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1

PLAYER 2: hand 2

PLAYER 2: draws 11 PLAYER 2: discards 2

DECK : 3 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0

10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2

PLAYER 3: hand 4
PLAYER 3: draws 3
PLAYER 3: discards 4

DECK : 2 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10

1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4

PLAYER 1: hand 6
PLAYER 1: draws 2
PLAYER 1: discards 2

DECK : 8 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1

8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2

PLAYER 2: hand 11 PLAYER 2: draws 8 PLAYER 2: discards 8

DECK : 10 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8

9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8

PLAYER 3: hand 3 PLAYER 3: draws 10 PLAYER 3: discards 3

DECK : 10 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9

9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3

PLAYER 1: hand 6
PLAYER 1: draws 10
PLAYER 1: discards 6

DECK : 2 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9

5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3 6

PLAYER 2: hand 11 PLAYER 2: draws 2 PLAYER 2: discards 11

DECK : 8 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5

7 8 7 4 10 9 3 1 1 1 2 4 2 8 3 6 11

PLAYER 3: hand 10 PLAYER 3: draws 8 PLAYER 3: discards 8

DECK : 0 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7

8 7 4 10 9 3 1 1 1 2 4 2 8 3 6 11 8

PLAYER 1: hand 10 PLAYER 1: draws 0 PLAYER 1: discards 10 DECK : 12 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8

7 4 10 9 3 1 1 1 2 4 2 8 3 6 11 8 10

PLAYER 2: hand 2
PLAYER 2: draws 12
PLAYER 2: discards 12

DECK : 6 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7

4 10 9 3 1 1 1 2 4 2 8 3 6 11 8 10 12

PLAYER 3: hand 10 PLAYER 3: draws 6 PLAYER 3: discards 6

DECK : 7 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4

10 9 3 1 1 1 2 4 2 8 3 6 11 8 10 12 6

PLAYER 1: hand 0
PLAYER 1: draws 7
PLAYER 1: discards 7

DECK : 5 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10

9 3 1 1 1 2 4 2 8 3 6 11 8 10 12 6 7

PLAYER 2: hand 2 PLAYER 2: draws 5 PLAYER 2: discards 5

DECK : 11 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9

3 1 1 1 2 4 2 8 3 6 11 8 10 12 6 7 5

PLAYER 3: hand 10 PLAYER 3: draws 11 PLAYER 3: discards 11

DECK : 11 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3

1 1 1 2 4 2 8 3 6 11 8 10 12 6 7 5 11

PLAYER 1: hand 0 PLAYER 1: draws 11 PLAYER 1: discards 0

DECK : 4 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1

1 2 4 2 8 3 6 11 8 10 12 6 7 5 11 0

PLAYER 2: hand 2 PLAYER 2: draws 4 PLAYER 2: discards 2

DECK : 0 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1

2 4 2 8 3 6 11 8 10 12 6 7 5 11 0 2

PLAYER 3: hand 10 PLAYER 3: draws 0

PLAYER 3: discards 0

DECK: 3 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2

4 2 8 3 6 11 8 10 12 6 7 5 11 0 2 0

PLAYER 1: hand 11

PLAYER 1: draws 3
PLAYER 1: discards 3

DECK : 0 6 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4

2 8 3 6 11 8 10 12 6 7 5 11 0 2 0 3

PLAYER 2: hand 4
PLAYER 2: draws 0
PLAYER 2: discards 0

DECK : 6 1 2 5 4 2 5 1 2 3 9 7 6 1 2 1 1 0 1 0 1 8 9 9 5 7 8 7 4 1 0 9 3 1 1 1 2 4 2

8 3 6 11 8 10 12 6 7 5 11 0 2 0 3 0

PLAYER 3: hand 10 PLAYER 3: draws 6 PLAYER 3: discards 10

DECK : 12 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8

3 6 11 8 10 12 6 7 5 11 0 2 0 3 0 10

PLAYER 1: hand 11 PLAYER 1: draws 12 PLAYER 1: discards 12

DECK : 5 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3

6 11 8 10 12 6 7 5 11 0 2 0 3 0 10 12

PLAYER 2: hand 4 PLAYER 2: draws 5 PLAYER 2: discards 4

DECK : 4 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3 6

11 8 10 12 6 7 5 11 0 2 0 3 0 10 12 4

PLAYER 3: hand 6 PLAYER 3: draws 4 PLAYER 3: discards 4

DECK : 2 5 12 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3 6 11

8 10 12 6 7 5 11 0 2 0 3 0 10 12 4 4

PLAYER 1: hand 11
PLAYER 1: draws 2
PLAYER 1: discards 11

DECK : 512 3 9 7 6 12 11 0 10 1 8 9 9 5 7 8 7 4 10 9 3 1 1 1 2 4 2 8 3 6 11 8

10 12 6 7 5 11 0 2 0 3 0 10 12 4 4 11

PLAYER 2: hand 5
PLAYER 2: draws 5
PLAYER 2: hand 5 5
PLAYER 2: wins

PLAYER 2: round completed PLAYER 3: round completed PLAYER 1: round completed DEALER: shuffle (round 3 / 3) DECK : 0 5 9 6 5 9 0 12 11 2 7 10 1 5 9 12 6 3 9 3 1 10 7 3 6 10 12 2 5 4 4 8

8 11 1 7 4 0 10 1 4 2 3 2 8 11 0 12 7

PLAYER 3: hand 6 PLAYER 3: draws 0 PLAYER 3: discards 0

DECK : 5 9 6 5 9 0 12 11 2 7 10 1 5 9 12 6 3 9 3 1 10 7 3 6 10 12 2 5 4 4 8 8

11 1 7 4 0 10 1 4 2 3 2 8 11 0 12 7 0

PLAYER 1: hand 8
PLAYER 1: draws 5
PLAYER 1: discards 8

DECK : 9 6 5 9 0 12 11 2 7 10 1 5 9 12 6 3 9 3 1 10 7 3 6 10 12 2 5 4 4 8 8 11

1 7 4 0 10 1 4 2 3 2 8 11 0 12 7 0 8

PLAYER 2: hand 11 PLAYER 2: draws 9 PLAYER 2: discards 11

DECK : 6 5 9 0 12 11 2 7 10 1 5 9 12 6 3 9 3 1 10 7 3 6 10 12 2 5 4 4 8 8 11 1

7 4 0 10 1 4 2 3 2 8 11 0 12 7 0 8 11

PLAYER 3: hand 6 PLAYER 3: draws 6 PLAYER 3: hand 6 6 PLAYER 3: wins

PLAYER 3: round completed

PLAYER 1: round completed

PLAYER 2: round completed

PLAYER 3: game finished PLAYER 1: game finished

PLAYER 2: game finished

Run 5 (seed = 4)

DEALER: shuffle (round 1/3)

DECK : 11 7 3 0 6 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0

2 5 9 11 7 2 6 9 8 6 8 10 1 2 12 3 9

PLAYER 1: hand 3 PLAYER 1: draws 11 PLAYER 1: discards 3

DECK : 7 3 0 6 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2

5 9 11 7 2 6 9 8 6 8 10 1 2 12 3 9 3

PLAYER 2: hand 1
PLAYER 2: draws 7
PLAYER 2: discards 1

DECK : 3 0 6 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5

9 11 7 2 6 9 8 6 8 10 1 2 12 3 9 3 1

PLAYER 3: hand 2

PLAYER 3: draws 3 PLAYER 3: discards 3

DECK : 0 6 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9

11 7 2 6 9 8 6 8 10 1 2 12 3 9 3 1 3

PLAYER 1: hand 11
PLAYER 1: draws 0
PLAYER 1: discards 0

DECK : 6 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11

7 2 6 9 8 6 8 10 1 2 12 3 9 3 1 3 0

PLAYER 2: hand 7
PLAYER 2: draws 6
PLAYER 2: discards 7

DECK : 5 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7

2 6 9 8 6 8 10 1 2 12 3 9 3 1 3 0 7

PLAYER 3: hand 2 PLAYER 3: draws 5 PLAYER 3: discards 2

DECK : 4 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2

6 9 8 6 8 10 1 2 12 3 9 3 1 3 0 7 2

PLAYER 1: hand 11
PLAYER 1: draws 4
PLAYER 1: discards 4

DECK : 12 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6

9 8 6 8 10 1 2 12 3 9 3 1 3 0 7 2 4

PLAYER 2: hand 6
PLAYER 2: draws 12
PLAYER 2: discards 6

DECK : 7 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9

8 6 8 10 1 2 12 3 9 3 1 3 0 7 2 4 6

PLAYER 3: hand 5
PLAYER 3: draws 7
PLAYER 3: discards 7

DECK : 10 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8

6 8 10 1 2 12 3 9 3 1 3 0 7 2 4 6 7

PLAYER 1: hand 11
PLAYER 1: draws 10
PLAYER 1: discards 10

DECK : 11 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6

8 10 1 2 12 3 9 3 1 3 0 7 2 4 6 7 10

PLAYER 2: hand 12 PLAYER 2: draws 11 PLAYER 2: discards 11 DECK : 10 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8

10 1 2 12 3 9 3 1 3 0 7 2 4 6 7 10 11

PLAYER 3: hand 5
PLAYER 3: draws 10
PLAYER 3: discards 5

DECK : 4 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1

2 12 3 9 3 1 3 0 7 2 4 6 7 10 11 5

PLAYER 1: hand 11
PLAYER 1: draws 4
PLAYER 1: discards 11

DECK : 10 4 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2

12 3 9 3 1 3 0 7 2 4 6 7 10 11 5 11

PLAYER 2: hand 12 PLAYER 2: draws 10 PLAYER 2: discards 12

DECK : 411 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2 12

3 9 3 1 3 0 7 2 4 6 7 10 11 5 11 12

PLAYER 3: hand 10 PLAYER 3: draws 4 PLAYER 3: discards 4

DECK : 11 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2 12 3

9 3 1 3 0 7 2 4 6 7 10 11 5 11 12 4

PLAYER 1: hand 4
PLAYER 1: draws 11
PLAYER 1: discards 11

DECK : 9 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2 12 3 9

3 1 3 0 7 2 4 6 7 10 11 5 11 12 4 11

PLAYER 2: hand 10 PLAYER 2: draws 9 PLAYER 2: discards 10

DECK : 5 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2 12 3 9 3

1 3 0 7 2 4 6 7 10 11 5 11 12 4 11 10

PLAYER 3: hand 10 PLAYER 3: draws 5 PLAYER 3: discards 5

DECK : 4 12 1 12 6 7 0 0 3 5 1 8 8 0 2 5 9 11 7 2 6 9 8 6 8 10 1 2 12 3 9 3 1

3 0 7 2 4 6 7 10 11 5 11 12 4 11 10 5

PLAYER 1: hand 4
PLAYER 1: draws 4
PLAYER 1: hand 4 4
PLAYER 1: wins

PLAYER 1: round completed PLAYER 2: round completed

PLAYER 3: round completed DEALER: shuffle (round 2 / 3)

DECK : 9 4 1 6 4 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10

8 8 4 0 11 1 2 3 1 8 7 5 7 12 6 11 4

PLAYER 2: hand 10 PLAYER 2: draws 9 PLAYER 2: discards 10

DECK : 4 1 6 4 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10 8

8 4 0 11 1 2 3 1 8 7 5 7 12 6 11 4 10

PLAYER 3: hand 12 PLAYER 3: draws 4 PLAYER 3: discards 4

DECK : 1 6 4 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10 8 8

4 0 11 1 2 3 1 8 7 5 7 12 6 11 4 10 4

PLAYER 1: hand 5
PLAYER 1: draws 1
PLAYER 1: discards 5

DECK : 6 4 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10 8 8 4

0 11 1 2 3 1 8 7 5 7 12 6 11 4 10 4 5

PLAYER 2: hand 9 PLAYER 2: draws 6 PLAYER 2: discards 6

DECK : 4 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10 8 8 4 0

11 1 2 3 1 8 7 5 7 12 6 11 4 10 4 5 6

PLAYER 3: hand 12 PLAYER 3: draws 4 PLAYER 3: discards 12

DECK : 1 12 11 9 3 2 0 9 5 3 10 6 2 11 2 10 7 9 6 8 3 0 7 12 5 0 10 8 8 4 0 11

1 2 3 1 8 7 5 7 12 6 11 4 10 4 5 6 12

PLAYER 1: hand 1 PLAYER 1: draws 1 PLAYER 1: hand 1 1 PLAYER 1: wins

PLAYER 1: round completed PLAYER 2: round completed PLAYER 3: round completed DEALER: shuffle (round 3 / 3)

DECK : 6 1 2 0 9 9 1 1 7 5 4 1 1 7 3 2 1 1 2 1 6 7 1 2 2 4 1 3 5 9 8 6 2 6 1 1 0 4

12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8

PLAYER 3: hand 1
PLAYER 3: draws 6
PLAYER 3: discards 1

DECK : 12 0 9 9 11 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12

10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1

PLAYER 1: hand 3
PLAYER 1: draws 12
PLAYER 1: discards 12

DECK : 0 9 9 11 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10

10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12

PLAYER 2: hand 8
PLAYER 2: draws 0
PLAYER 2: discards 0

DECK : 9 9 11 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10

10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0

PLAYER 3: hand 6 PLAYER 3: draws 9 PLAYER 3: discards 6

DECK : 9 11 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10

0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6

PLAYER 1: hand 3
PLAYER 1: draws 9
PLAYER 1: discards 3

DECK : 11 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0

8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3

PLAYER 2: hand 8
PLAYER 2: draws 11
PLAYER 2: discards 11

DECK : 7 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8

3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11

PLAYER 3: hand 9 PLAYER 3: draws 7 PLAYER 3: discards 7

DECK : 5 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3

0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7

PLAYER 1: hand 9 PLAYER 1: draws 5 PLAYER 1: discards 5

DECK : 4 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0

4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5

PLAYER 2: hand 8 PLAYER 2: draws 4 PLAYER 2: discards 4

DECK : 11 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4

10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4

PLAYER 3: hand 9

PLAYER 3: draws 11
PLAYER 3: discards 11

DECK : 7 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10

9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11

PLAYER 1: hand 9
PLAYER 1: draws 7
PLAYER 1: discards 9

DECK : 3 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9

7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9

PLAYER 2: hand 8
PLAYER 2: draws 3
PLAYER 2: discards 8

DECK : 2 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7

5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8

PLAYER 3: hand 9 PLAYER 3: draws 2 PLAYER 3: discards 9

DECK : 1 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5

5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9

PLAYER 1: hand 7
PLAYER 1: draws 1
PLAYER 1: discards 1

DECK : 12 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5

211 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1

PLAYER 2: hand 3
PLAYER 2: draws 12
PLAYER 2: discards 12

DECK : 1 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2

11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12

PLAYER 3: hand 2 PLAYER 3: draws 1 PLAYER 3: discards 2

DECK : 6 7 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11

8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2

PLAYER 1: hand 7
PLAYER 1: draws 6
PLAYER 1: discards 7

DECK : 712 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8

1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2 7

PLAYER 2: hand 3
PLAYER 2: draws 7
PLAYER 2: discards 7

DECK : 12 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2 7 7

PLAYER 3: hand 1 PLAYER 3: draws 12 PLAYER 3: discards 1

DECK : 2 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12

0 6 3 11 7 5 4 11 9 8 9 1 12 2 7 7 1

PLAYER 1: hand 6
PLAYER 1: draws 2
PLAYER 1: discards 6

DECK : 4 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0

6 3 11 7 5 4 11 9 8 9 1 12 2 7 7 1 6

PLAYER 2: hand 3
PLAYER 2: draws 4
PLAYER 2: discards 4

DECK : 1 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6

3 11 7 5 4 11 9 8 9 1 12 2 7 7 1 6 4

PLAYER 3: hand 12 PLAYER 3: draws 1 PLAYER 3: discards 1

DECK : 3 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3

11 7 5 4 11 9 8 9 1 12 2 7 7 1 6 4 1

PLAYER 1: hand 2
PLAYER 1: draws 3
PLAYER 1: discards 2

DECK : 5 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11

7 5 4 11 9 8 9 1 12 2 7 7 1 6 4 1 2

PLAYER 2: hand 3
PLAYER 2: draws 5
PLAYER 2: discards 5

DECK : 9 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7

5 4 11 9 8 9 1 12 2 7 7 1 6 4 1 2 5

PLAYER 3: hand 12 PLAYER 3: draws 9 PLAYER 3: discards 9

DECK : 8 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5

4 11 9 8 9 1 12 2 7 7 1 6 4 1 2 5 9

PLAYER 1: hand 3
PLAYER 1: draws 8
PLAYER 1: discards 3

DECK : 6 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4

11 9 8 9 1 12 2 7 7 1 6 4 1 2 5 9 3

PLAYER 2: hand 3

PLAYER 2: draws 6 PLAYER 2: discards 3

DECK : 2 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11

9 8 9 1 12 2 7 7 1 6 4 1 2 5 9 3 3

PLAYER 3: hand 12 PLAYER 3: draws 2 PLAYER 3: discards 12

DECK : 6 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9

8 9 1 12 2 7 7 1 6 4 1 2 5 9 3 3 12

PLAYER 1: hand 8
PLAYER 1: draws 6
PLAYER 1: discards 8

DECK : 11 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8

9 1 12 2 7 7 1 6 4 1 2 5 9 3 3 12 8

PLAYER 2: hand 6
PLAYER 2: draws 11
PLAYER 2: discards 6

DECK : 0 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9

1 12 2 7 7 1 6 4 1 2 5 9 3 3 12 8 6

PLAYER 3: hand 2 PLAYER 3: draws 0 PLAYER 3: discards 2

DECK : 4 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1

12 2 7 7 1 6 4 1 2 5 9 3 3 12 8 6 2

PLAYER 1: hand 6 PLAYER 1: draws 4 PLAYER 1: discards 6

DECK : 12 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12

2 7 7 1 6 4 1 2 5 9 3 3 12 8 6 2 6

PLAYER 2: hand 11 PLAYER 2: draws 12 PLAYER 2: discards 11

DECK : 10 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2

7 7 1 6 4 1 2 5 9 3 3 12 8 6 2 6 11

PLAYER 3: hand 0
PLAYER 3: draws 10
PLAYER 3: discards 10

DECK : 10 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2 7

7 1 6 4 1 2 5 9 3 3 12 8 6 2 6 11 10

PLAYER 1: hand 4
PLAYER 1: draws 10
PLAYER 1: discards 10

DECK : 10 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2 7 7

1 6 4 1 2 5 9 3 3 12 8 6 2 6 11 10 10

PLAYER 2: hand 12 PLAYER 2: draws 10 PLAYER 2: discards 12

DECK : 0 8 3 0 4 10 9 7 5 5 2 11 8 1 12 0 6 3 11 7 5 4 11 9 8 9 1 12 2 7 7 1 6

4 1 2 5 9 3 3 12 8 6 2 6 11 10 10 12

PLAYER 3: hand 0 PLAYER 3: draws 0 PLAYER 3: hand 0 0 PLAYER 3: wins

PLAYER 3: round completed PLAYER 1: round completed PLAYER 2: round completed PLAYER 3: game finished PLAYER 1: game finished PLAYER 2: game finished