Questions

Activity 2

1. Deck is composed of Cards. Relationship is aggregation.
2. 18 cards
3. ranks = {“2”,”3”,”4”,”5”,”6”,”7”,”8”,”9”,”10”,”Jack”,”Queen”,”King”,”Ace”

suits = {“Spades”,”Clubs”,”Hearts”,”Diamonds”}

pointValues = {2,3,4,5,6,7,8,9,10,10,10,10,11}

1. Rank and Value matter because the loop matches the index of the two lists in the Deck constructor. The order of suits does not matter.

Activity 3

1.

public boolean flip()

{

If( ((int) Math.Random)%3==0){

Return “heads”;}

Else{

Return “tails”;}

}

2.

Public boolean arePermutation(Array array1,Array array2)

{

Array placeholder = new Array[];

placeholder = array2;

For (int i=0; i<array1.length(),i++)

{

placeholder[Array2.indexOf(array1[1])] = null;

}

Return placeholder == null;

}

3. 4,3,2,1

Activity 5

Buggy 1: The isEmpty is returned as false for an empty deck. This could be caused by containing an if return size !=0 instead of return size==0.

Buggy2: There is an error for returning a size 0 for a deck of size 1. This could be caused by decrementing the size to 0 before dealing and returning the size of the deck.

Buggy3: The shuffle method is causing an error of the decks still being identical. This could be caused by the new deck to be assigned to a reference to the old variable, so that when the deck is shuffled, the references are the same.

Buggy4: The error is having the card be null for a one card deck. This could be caused by decrementing the size to 0 before dealing, so that the deck is of size 0 when the deck is dealt.

2. All tests passed.

Activity 6

1. 5spades+6clubs, 5clubs+6clubs
2. Yes, you must have removed 3K , 3Q and 3J by this time. All of the numbered cards pair up with their 11-# match so all of the numbered cards have been removed as well.
3. I won more when I did not remove the face cards unless I had to. This is because it gives 3 more chances for matches when there are no matches on the table, compared with 2 for a normal pair.

Activity 7

1. Board size, cards in deck, cards on board
2. Start with 7 cards on the board. If two cards on the board have point values that add up to 11, or if there is a Jack+Queen+King, replace them with cards from the deck. Repeat until no possible swaps, or no cards remaining.
3. Yes

4a. It is called in the Boards class.

4b. The isLegal method should call the two contains methods as they check if the move is legal. AnotherPlayIsPossible needs to also as you can only continue to play if the legal moves are possible.

4c. Jh,6c,2s,As,4h leave blank the spaces with null

4d.

For(int i=0, i<cIndexes.length;i++)

{

System.out.println(rank+”of”+suit+”(point value = “+pointValue+”)”;

}

4e. AnotherPlayIsPossible because you need to reset the board from the previous turn. The method will then call the contains… methods to see if there are possible matches on the current board.

Activity 8

1. d
2. d
3. d

Activity 9

1. d
2. d
3. d