Remarks on recitation assignment 9 - 8 - 09.

You may re-submit recitation 9-8-09 assignment in recitation 9-15-09.

In these remarks I am reporting the data submitted (with proper annotation) by one of your classmates who actually kept track of the order in which each of her 25 subjects chose their 3 spots. It is not required that you keep track of order although it may be germaine to detecting departures from random selction.

The student coded the 15 game piece spots as

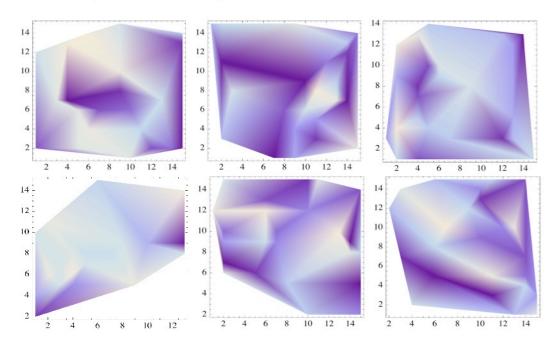
$$\begin{pmatrix}
1 & 2 & 3 \\
4 & 5 & 6 \\
7 & 8 & 9 \\
10 & 11 & 12 \\
13 & 14 & 15
\end{pmatrix}$$

Here is her data table. Each row represents the *sequence* of selections by a single person from the 15 spots on the game piece. So the first subject chose spot 1 then spot 10 then spot 12.

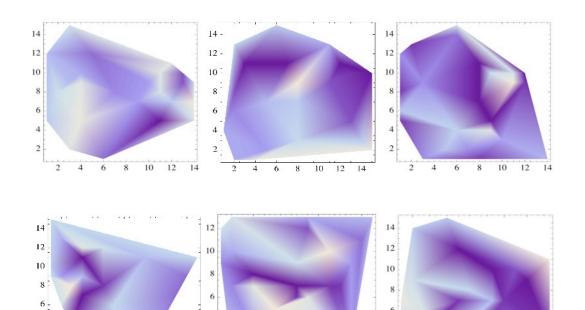
```
10 12
   7
      14
5 8
      11
  6 15
4 5
       6
   7
4
       10
   8
13
      12
   4
1
       7
  9
6
8
      12
4
      11
   9
2
       8
10
1
       3
5
6
   7
       12
  15 10
3
   7
      12
2
    6
       14
13 14
      15
4
   8
      13
9
    5
      14
13
  9
       2
3 5
7 8
      12
7
4
7
      11
  7
      13
   8
       9
2
   11 14
```

She detected what to her appeared to be non-random behavior on the part of the 25 subjects, things like choosing spots arranged in various obvious patterns around the game piece. If so, that could give us a clue as to how people fill out such forms.

Can we visually detect departures from random play? As an experiment I've created particular graphical portraits of 11 completely random 25x3 game piece data sets. Included among them is a similarly made portrait of the student's data. Which one of the 12 do you think visually stands out from the rest?



2 4 6 8 10 12 14



2 4 6 8 10 12 14

2 4 6 8 10 12 14