27/01/2021 question_1.js

```
1 import { mean, stdev } from './util'
 2
 3 const means = {}
 4 const stdevs = {}
 5 let observations = []
 7 for (let i of [0, 1, 2]) {
 8
    for (let j of [0, 1, 2]) {
 9
       let sample = [i, j]
10
       sampleMean = mean(sample)
       sampleStdev = stdev(sample)
11
12
13
       means[sampleMean] = 1 + (means[sampleMean] ?? 0)
       stdevs[sampleStdev] = 1 + (stdevs[sampleStdev] ?? 0)
14
15
       observations = [...observations, {i, j, sampleMean, sampleStdev }]
16
     }
17 }
18
19 const combinations = observations.length
21 console.table(observations)
22
23 console.table(
24
    Object.keys(means).sort()
25
       .reduce((acc, x) => [ ...acc, { x, probabilty:
   `${means[x]}/${combinations}` }], []))
26
27 console.table(
28
    Object.keys(stdevs).sort()
29
       .reduce((acc, x) => [ ...acc, { x, probabilty:
   `${stdevs[x]}/${combinations}` }], []))
30
```

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