CS 171-A

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HW4

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| --- | --- | --- | --- | --- | --- | --- | --- |
| # Tests | 10 | 50 | 100 | 500 | 1000 | 5000 | 10000 |
| 1 Stay | 30% | 24% | 34% | 31.4% | 33.8% | 33.54% | 33.73% |
| 1 Switch | 70% | 76% | 66% | 68.6% | 66.2% | 66.46% | 66.27% |
| 2 Stay | 30% | 30% | 42% | 30.4% | 32.5% | 32.96% | 33.98% |
| 2 Switch | 70% | 70% | 58% | 69.6% | 67.5% | 67.04% | 66.02% |
| 3 Stay | 40% | 42% | 32% | 30.8% | 33.2% | 33.24% | 32.98% |
| 3 Switch | 60% | 58% | 68% | 69.2% | 66.8% | 66.76% | 67.02% |
| 4 Stay | 40% | 30% | 35% | 33.8% | 34.5% | 34.7% | 32.78% |
| 4 Switch | 60% | 70% | 65% | 66.2% | 65.5% | 65.3% | 67.22% |
| 5 Stay | 20% | 34% | 29% | 32.2% | 32.6% | 33.62% | 33.97% |
| 5 Switch | 80% | 66% | 71% | 67.8% | 67.4% | 66.38% | 66.03% |

According to the simulation, it appears to be best to switch when playing “Let’s Make a Deal”. On average as more tests are run the odds of winning on a switch approach 2/3 and stay approaches 1/3. This can be most clearly seen in the 10,000 tests column.