

HW4 Results and Discussion

Results:

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[Austins-MacBook-Pro:HW4 austinramberg$ ./ex
Strategy 1 won: 32.80% of the time.
Strategy 2 won: 66.24% of the time.

[Austins-MacBook-Pro:HW4 austinramberg$ ./ex
Strategy 1 won: 33.49% of the time.
Strategy 2 won: 66.35% of the time.

[Austins-MacBook-Pro:HW4 austinramberg$ ./ex
Strategy 1 won: 32.98% of the time.
Strategy 2 won: 66.25% of the time.

[Austins-MacBook-Pro:HW4 austinramberg$ ./ex
Strategy 1 won: 34.44% of the time.
Strategy 2 won: 66.23% of the time.

[Austins-MacBook-Pro:HW4 austinramberg$ ./ex
Strategy 1 won: 34.27% of the time.
Strategy 2 won: 66.45% of the time.
```

Trial		Percent Win	Number of Wins
1	Stay Wins	32.80%	3,280
	Switch Wins	66.24%	6,624
2	Stay Wins	33.49%	3,349
	Switch Wins	66.35%	6,635
3	Stay Wins	32.98%	3,298
	Switch Wins	66.25%	6,625

4	Stay Wins	34.44%	3,444
	Switch Wins	66.23%	6,623
5	Stay Wins	34.27%	3,427
	Switch Wins	66.45%	6,645

Conclusion:

Through empirical experimentation of 10,000 tests, I conclude that it is better to switch doors than to stay with your original door as you have a 33% chance of winning by staying and a 66% chance of winning if you switch.