

# Tarea1\_Simulacion\_Chabelo

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## 1 Tarea 1. Monty Hall Problem with Chabelo.

L.E. Rojón

138442

Let the Monty Hall problem with Chabelo as host,

1. Three doors, 1 is the winning door, 1 is chosen by the contestant.

2. Chabelo opens the door that is not the winning door or the one chosen by the contestant.

3. The contestant chooses whether to switch doors or not.

The following code is a simulation to compare the win rate if the contestant switches doors or not.

```
In [1]: import random as rand
        doors=[i for i in range(1,4)]
        doors
```

```
Out[1]: [1, 2, 3]
```

```
In [2]: chosenDoor=1 #We can suppose that the contestant picks the same door every time without
        chosenDoor
```

```
Out[2]: 1
```

```
In [3]: j=0.0
        n=10**6

        for i in range(1, n):
            winningDoor=rand.randint(1,3)
            if (winningDoor==2):
                alternativeDoor=2
            else:
                alternativeDoor=3

            if(alternativeDoor==winningDoor):
                j=j+1
                #print j

        #print alternativeDoor,winningDoor
```

```
#print j  
#print n  
print (j/n)
```

0.666624