The Doors

I remember under the early 90 th that Marilyn vos Savant present the doors problem. If you have three doors and that you got a car behind one of the doors. If you pick a door and than open a door who there is no car behind. Then if you change the door you selected and you chose the another door, then the probability 2/3 that you win the car.
I must say that I agree with Marilyn vos Savant, and I have written a program i Basic who simulates the problem. If you chose a door the probabability is 2/3 that you chose the wrong door. If you then open a wrong door it is like that you mirror the problem and you got 2/3 chances than you win the car, if you chose the another door.

The program in below written in quick-basic and simulates the door problem

```
DEFDBL A-Z
RANDOMIZE (TIMER)
CLS
N = 10000:                          REM Number of times you do the experiment
FOR i = 1 TO N:                     REM Steps N times in a loop
    a = INT(RND(1) * 3) + 1:        REM  Randomize a door that is the winning door
    b = INT(RND(1) * 3) + 1:        REM  Randomize a door who is the chose
10  c = INT(RND(1) * 3) + 1:        REM   Select a door away
    IF c = a OR c = b THEN GOTO 10: REM  Check that the door is false
    b1 = b:                         REM  Set the choses to b1
20  b = INT(RND(1) * 3) + 1:        REM Change the door
    IF b = b1 OR b = c THEN GOTO 20: REM Check that the door is changed
    IF b = a THEN k = k + 1:        REM If  I won increment k

NEXT
PRINT k / N * 100; "%":             REM Print how mush I won in %
```