Monthy-Hall

- https://en.wikipedia.org/wiki/Monty_Hall_problem

The Monty-Hall problem consists on an statistical problem where the following situation is proposed:

> you're on a game show where you're offered three closed doors and asked to pick one; behind one of those doors there is a prize, the remaining two have nothing. After you pick one the host removes one of the remaing two from the game and asks if you want to change your previous choice. Note that the door just eliminated by the host is *certain* to not be the one hiding the prize.

The question proposed then is "should you change your previously chosen door or not?".

Considering the choice done at first – among three doors – is completely random, the chances of choosing the "right" door is of 1/3. On your second choice – now over two doors only –, what are the chances of winning the prize either by sticking to the first choice or changing to the other one?

The right answer to this question – statistically proved – is "yes, you should change the door when asked to you, after the elimination of a/the third door". And the reason is because the probaility of finding the prize behind the "other" door is of 2/3 now.

To most of the people, including me, this result is not easy to accept. To check that, we can simulate the game and verify the results.

Input Format

The problem accepts onw simple input: either `True`, or `1` for when the simulation with the player choosing to, yes, change the door at the second choice. Either `False` or `0` to simulate when the player doesn't change the doors.

Requirements

The simulation should be executed at least 10000 times.

Output Format

Percentage of success/fail of door select (with/without prize).

Sample Input

1

Sample Output

66.66

Explanation

The probaility of finding the prize behind the "other" (second) door is of 2/3.

Exercise

Define a function `run(should_change)` that simulates the process 10000 times, in a file `monthy_hall.py` with the following structure:

```python
'''
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Notes:
* <any notes about the problem>
'''

author = '<your-name-here>'

# Imports, other function definition, global variables and anything else
# you feel is useful to implement the solution can be done/defined here.


def run(should_change):
    '''
    Print the percentage of success

    '''
    output = None

    # do stuff; define 'output' properly.

    return output
```