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Exercise 4

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Exercise 4

5.0/5.0 points (graded)

You have a bucket with 3 red balls and 3 green balls. Assume that once you draw a ball out of the bucket, you don't replace it. What is the probability of drawing 3 balls of the same color?

Write a Monte Carlo simulation to solve the above problem. Feel free to write a helper function if you wish.

```
1 def oneTrial():
2     '''
3     Simulates one trial of drawing 3 balls out of a bucket containing
4     3 red and 3 green balls. Balls are not replaced once
5     drawn. Returns True if all three balls are the same color,
6     False otherwise.
7     '''
8     balls = ['r', 'r', 'r', 'g', 'g', 'g']
9     chosenBalls = []
10    for t in range(3):
11        # For three trials, pick a ball
12        ball = random.choice(balls)
13        # Remove the chosen ball from the set of balls
14        balls.remove(ball)
15        # and add it to a list of balls we picked
```

Press ESC then TAB or click outside of the code editor to exit

Correct

Test results

CORRECT

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Exercise 4

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<div><div>?</div><div>Getting close to the real value in ~ 500 Trials. Can't passed first couple of tests. Help.</div><div>I am getting close to the actual probability value (0.05) in ~ 500 trials. Because it is much less than the 5000 used by the grader I am...</div></div>	4
<div><div>?</div><div>Not enough uses of random?</div><div>I implemented a more complex model of the estimation of fraction of times three balls of same color being drawn, adding in samples...</div></div>	2
<div><div>?</div><div>MAJOR SPOILER - why am I getting this: "You used the random module less times than the number of trials, so you are probably not running a real simulation."</div><div>import random three_same = 0 for i in range(numTrials): L = ["red","red","red","green","green","green"] red_ct = 0 green_ct = 0 for j in r...</div></div>	3
<div><div>?</div><div>spoiler</div><div>Hi all, what is different between these two codes ? what I am missing ? ball = random.choice(balls) balls.remove(ball) and balls.pop(r...</div></div>	2



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