The birthday problem

Given 20 people at random, what is the probability that there are 4 months with 3 birthdays only and 4 months with 2 birthdays only?

Success = 0

Repeat a million times

1. Birthdays = Randomly generate the numbers from 1:12 twenty times.
2. Counts = [ sum(birthdays .== i) for i=1:12 ]
3. If sum(counts .== 3) == 4 && sum (counts .== 2) == 4 then success += 1

Return success / million # which is the probability for the given condition