

Dr. Z.'s Intro to Probability Homework assignment 24

Due, Dec. 16, 2017, 5:00pm to DrZprob@gmail.com.

1. Generate (empirically, **not** from your Head, and **not** from a computer) a random binary sequence of 1s and 0s of length 100 in one of the following **mechanical** ways (you may pick any of these, but once you decide, you have to stick to it, i.e. you can't switch in the middle)

- Toss a coin 100 times and record (in order) the sequence of Heads and Tails. If it is Heads, write down 1 if it is Tails write-down 0.
- Spin (the same!) dreidel 100 times and whenever you get Gimel or Heh write-down 1 and whenever you get Nun or Shin write-down 0.
- Roll (the same!) die 100 times, and whenever it is **odd** (i.e. 1, 3, 5) write-down 1, and whenever it is even (i.e. 2, 4, 6) write down 0.

Write the sequence in **Maple list format**, but with 20 per line

for example:

#YourNameHere

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[1, 0, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0,
1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 0, 0, 0, 0, 1, 0, 0, 0, 1, 0,
0, 0, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 1, 1, 1,
1, 1, 0, 0, 0, 1, 1, 1, 0, 1, 0, 0, 0, 0, 1, 1, 0, 1, 1, 1,
0, 0, 0, 1, 0, 0, 0, 0, 1, 1, 0, 0, 1, 0, 0, 1, 1, 1, 1, 1]
```

then Email them, no later than Dec. 17, 2017, 5:00pm, to

DrZprob@gmail.com

Subject: HW24

and then copy-and-paste the above into the body of your message.

Warning: Please no cheating! For example, if I get two identical submissions, the computer will detect it. The chance of that happening (w/o cheating) is $1/2^{100}$.

Comment: You don't have to do it all at once! You can take study-breaks and do, say, ten tosses at time.