The sequence X_n is iid with common CDF $F(\ )$. Is it stationary ?

1. Yes
2. No
3. It depends on the variance of the distribution with CDF $F()$
4. I don't know

0% 0% 0% 0%

1 2 3 4

The sequence X_n is a random walk, i.e. $X_n = Z_1 + \cdots + Z_n$ where Z_n is an iid sequence.

Is the sequence X_n stationary ?

1. Yes
2. No
3. It depends whether Z_n is 0 mean
4. I don't know

0%   0%   0%   0%

1   2   3   4

3

The sequence X_n is iid with common CDF $F(\quad)$. Is it stationary?

$X_1 \sim F(\ )$

$X_{n+1} = X_n$
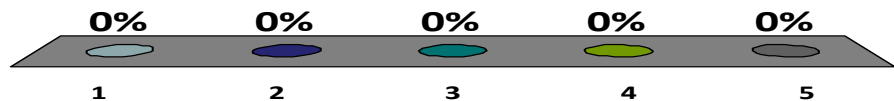with proba p

$X_{n+1} \sim F(\ )$
with proba $(1-p)$

1. Yes
2. No
3. It depends on the variance of the distribution with CDF $F()$
4. I don't know

0%	0%	0%	0%
1	2	3	4

We simulate a single server queue and measure the mean queue length and the mean response time.

Which of these two statistics are time based statistics ?

1. None
2. Mean queue length
3. Mean response time
4. Both
5. I don't know

0%   0%   0%   0%   0%
1   2   3   4   5

We simulate a single server queue.

Is this a stationary simulation ?

1. Yes
2. No
3. It depends on the parameters of the system
4. I don't know

0%   0%   0%   0%

1   2   3   4

We simulate a random waypoint mobility model.

Is this a stationary simulation ?

1. Yes
2. No
3. It depends on the parameters of the system
4. I don't know

0%   0%   0%   0%

1   2   3   4

7

A function is defined by

COIN(p)=
  if rand()<p
    0
  else
    1

What does it compute ?

1. A sample of a geometric random variable with mean $\frac{1}{p}$
2. A sample of a geometric random variable with mean $\frac{1}{1-p}$
3. A sample of a Bernoulli random variable with mean p
4. A sample of a Bernoulli random variable with mean $1-p$
5. I don't know

0% 0% 0% 0% 0%
1   2   3   4   5

8
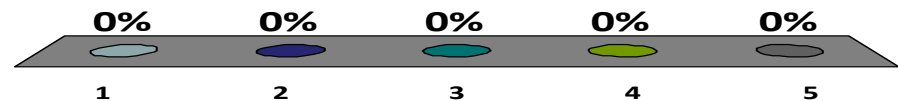
A function is defined by

myfun(λ)=
  randexp()/λ

where randexp() returns a sample of the exponential distribution with mean 1.

What does it compute ?

1. A sample of an exponential random variable with parameter λ
2. A sample of an exponential random variable with parameter $\frac{1}{\lambda}$
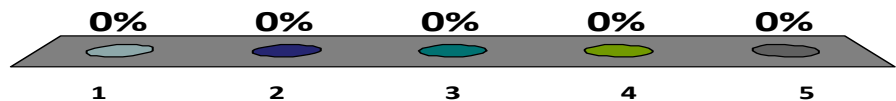3. None of the above
4. I don't know

0%   0%   0%   0%

1   2   3   4

9

A function is defined by

myfun()=
$$\left\lfloor -\log\left(\text{rand}()\right)\right\rfloor$$

What does it compute ?

1. A sample of an exponential random variable
2. A sample of a geometric random variable
3. A sample of a Bernoulli random variable
4. None of the above
5. I don't know

0%   0%   0%   0%   0%

1   2   3   4   5

A function is defined by

myfun()=
do
　$X := \mathrm{randn}(1, 1)$
until $X > 0$
return(X**)**

What does it compute ?

1. A sample of a gaussian random variable
2. A sample of a random variable that is not gaussian
3. I don't know

0%　　　0%　　　0%

1　　　2　　　3
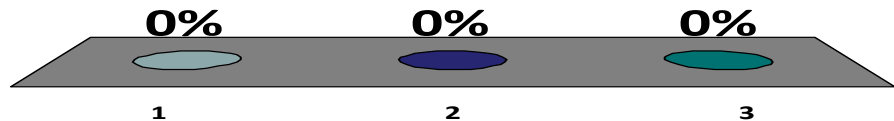
Independent output of a simulation are obtained by…

A. using the last RNG state of one run as seed to the next run

B. executing the runs in parallel on parallel processors using the same seed for all runs

C. executing the runs in parallel on different processors and using truly random seeds for all runs

1. None
2. A
3. B
4. C
5. A and B
6. A and C
7. B and C
8. All
9. I don't know