Ryan Tillis - R Programming - Data Science - Quiz 4 - Coursera

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R Programming Quiz 4

This is Quiz 3 from the R Programming course within the Data Science Specialization.

Questions

1. What is produced at the end of this snippet of R code?

```
set.seed(1)
rpois(5, 2)
```

```
## [1] 1 1 2 4 1
```

- **A vector with the numbers 1, 1, 2, 4, 1**

```
set.seed(1)
rpois(5, 2)
```

```
## [1] 1 1 2 4 1
```

2. What R function can be used to generate standard Normal random variables?

- **rnorm**

```
rnorm(10, 0, 1)
```

```
##  [1]  1.272429321  0.414641434 -1.539950042 -0.928567035 -0.294720447
##  [6] -0.005767173  2.404653389  0.763593461 -0.799009249 -1.147657009
```

3. When simulating data, why is using the set.seed() function important? Select all that apply.

- **It ensures that the sequence of random numbers starts in a specific place and is therefore reproducible.**

Explanation:

Set.seed allows other to get the same psuedorandom sequence to verify results.

```
set.seed(22)
```

4. Which function can be used to evaluate the inverse cumulative distribution function for the Poisson distribution?

- **qpois**

Explanation:

See documentation ?qpois

5. What does the following code do?

```
set.seed(10)
x <- rep(0:1, each = 5)
e <- rnorm(10, 0, 20)
y <- 0.5 + 2 * x + e
```

- **Generate data from a Normal linear model**

6. What R function can be used to generate Binomial random variables?

- **rbinom**

7. What aspect of the R runtime does the profiler keep track of when an R expression is evaluated?

- **the function call stack**

8. Consider the following R code

library(datasets) Rprof() fit <- lm(y ~ x1 + x2) Rprof(NULL)

- **100%**

9. When using ‘system.time()’, what is the user time?

- **It is the time spent by the CPU evaluating an expression**

10. If a computer has more than one available processor and R is able to take advantage of that, then which of the following is true when using ‘system.time()’?

- **Elapsed time may be smaller than user time**

Check out my website at: http://www.ryantillis.com/