Alternate Midterm

Statistics 506, 2017

10/26/2017

Instructions

This is an alternate midterm similar in content to the one given in class on October 24, 2017. You have 10 minutes for each question assigned to you.

Questions

1. For each of the regular expressions in the first row of the table below, indicate which strings it matches among the rows names by writing 'T' (for "TRUE") when there is a match. Leave the remaining cells blank. [25 points]

string ↓ regex →	`^A.*[^rstlne]$`	`[aeiou]{2,}`	`(ai|ei).*a$`	`[^aeiou]{3,}`	`([AEIOUaieou]).*\1`
Antoni					
Janeisha					
Jonquil					
Juanjose					
Kailyn					
Kaseem					
Leslea					
Ronique					
Taina					
Theophilus					

2. For each snippent of R code below, report the value held as `z` in the global environment after the code is run. You may assume each code block starts in a clean R session.

a.

```
z = matrix(1:2, 2, 2)
y = lapply(1:nrow(z), function(z) z %*% z )
y[[2]]
```

b.

```
z = 1
y = function(z){
  if(z %% 2 == 0){
     z
  } else{
     z-1
  }
}
z = z*y(z)
```

c.

```
z = seq(3,99,3)
dim(z) = c(3, 11)
sum(z[,1] / 3)
```

d.

```
z = 42 %/% 5
while(z %% 2 == 0 && z > 0){
  z = 3*{z / 2}
}
z
```

e.

```
z = 45 %% 2
f = function(x) {x + 1}
z = f(f(z))
```