

RUM quiz 1 answers

1. Rickets
2. Rhythms (The longest common word in Modern English is rhythms. However, the "y" does provide a vowel sound but none of the five vowels appear in the word. The longest word which is still considered by some to be Modern English but is quite rarely used, is symphysy.)
3. Rhode Island
4. Erica, Sandra, Rita, and Mary

1. c) gapminder
2. Hmisc package
3. "ugly" grey

4

a.

```
symbols(x = 1, y = 1, circles = 1, lwd = 3, bg = yellow",
        xaxt = "n", yaxt = "n", xlab = "", ylab = "", bty="n")
# second lines turns off the axes, axis labels and surrounding frame
text(1, 1, ":", srt = 270, cex = 5)
```

b.

```
x = 1:50; y = 1:50
d1 <- expand.grid(x, y)
plot(d1, pch = 21, bg = c(0,1), xlab= "", ylab = "", xaxt = "n", yaxt = "n")
```

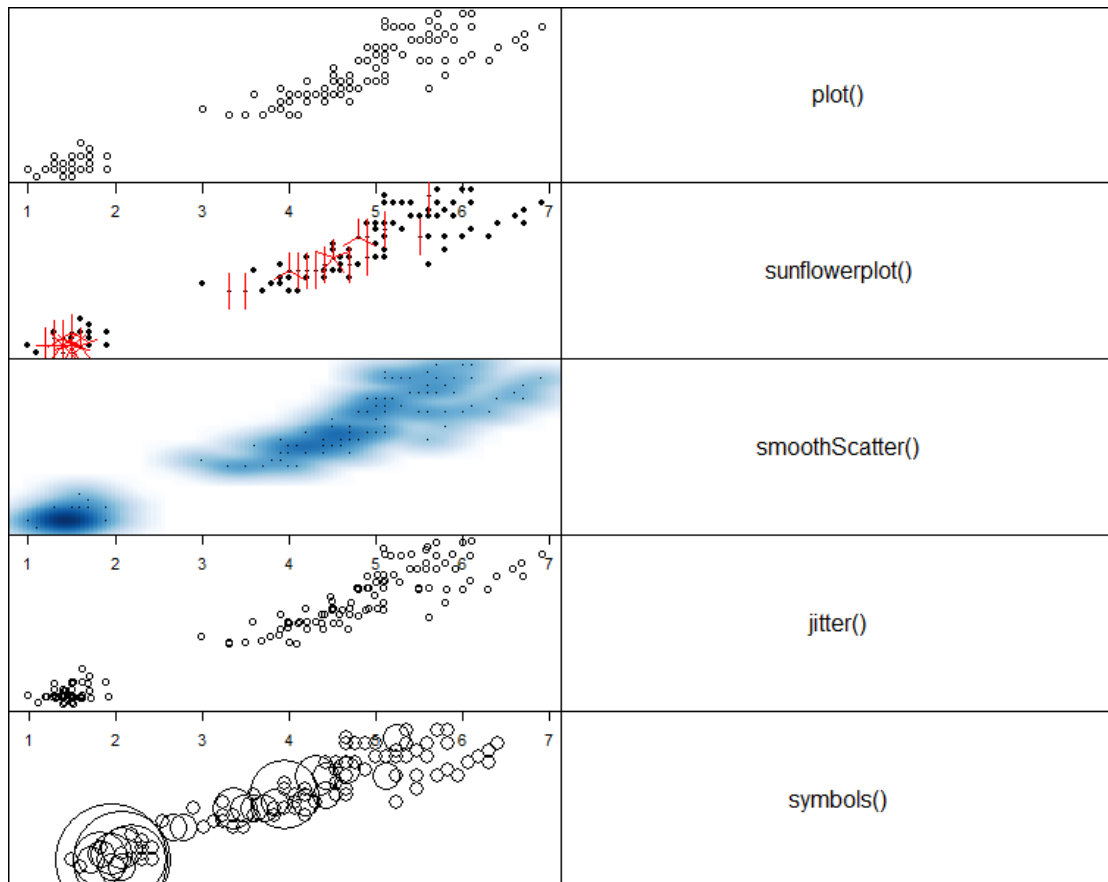
5.

```
> 10 %% 2
[1] 0
> 11 %% 2
[1] 1
> 1:10 * 2
[1] 2 4 6 8 10 12 14 16 18 20
> 1:10%%2
[1] 1 0 1 0 1 0 1 0 1 0
> 1:10 * 2 %% 2
[1] 0 0 0 0 0 0 0 0 0 0
> 1:(10 * 2)
[1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
```

6.

```
mtcars[order(mtcars$wt, decreasing = T),][order(mtcars$cyl[order(mtcars$wt, decreasing = T)]),]
```

7.



```
par(mfrow = c(5,2), mar = c(0,0,0,0))

plot(iris[,3:4])
plot(1,1, type = "n", xlab = "", ylab = "", xaxt = "n", yaxt = "n")
text(1,1, "plot()", cex = 1.5)

sunflowerplot(iris[, 3:4])
plot(1,1, type = "n", xlab = "", ylab = "", xaxt = "n", yaxt = "n")
text(1,1, "sunflowerplot()", cex = 1.5)

smoothScatter(iris[, 3:4])
plot(1,1, type = "n", xlab = "", ylab = "", xaxt = "n", yaxt = "n")
text(1,1, "smoothScatter()", cex = 1.5)

plot(jitter(iris[, 3]), jitter(iris[, 4]))
plot(1,1, type = "n", xlab = "", ylab = "", xaxt = "n", yaxt = "n")
text(1,1, "jitter()", cex = 1.5)

dat <- as.data.frame(table(iris[,3:4]))
dat <- dat[dat[,3] > 0,]
symbols(dat[,1:2], circles = dat[,3], inches = 0.4)
plot(1,1, type = "n", xlab = "", ylab = "", xaxt = "n", yaxt = "n")
text(1,1, "symbols()", cex = 1.5)
```

8. ggplot2, devtools, dplyr, tidyr