1 Quiz for Week 3

Using the help files

- For many questions on this weeks quiz, reading the help files can help the user determine the correct answers quickly.
- Some of the options are not the actual names of the R commands.
- ullet It is also useful to learn about other commands, even if they are obviously not the correct answer

help(plot)			
help(hist)			

The lattice package

Which of these functions opens a graphics device in R?

- (a) save()
- (b) pdf()
- (c) axis()
- (d) serialize()

Question 2

Which function opens the default graphics device on Windows?

- (a) xfig()
- (b) jpeg()
- (c) windows()
- (d) postscript()

Question 3

Which of the following functions is part of the base graphics system?

- (a) barchart()
- (b) histogram()
- (c) xyplot()
- (d) plot()

Which of the following functions is generally used to annotate a plot in the base graphics system?

- (a) barplot()
- (b) points()
- (c) plot()
- (d) hist()

Question 5

What does the 'pch' option to par() control?

- (a) the plotting symbol/character in the lattice graphics system
- (b) the line width in the base graphics system
- (c) the plotting symbol/character in the base graphics system
- (d) the orientation of the axis labels on the plot

Question 6

Under the lattice graphics system, what do the primary plotting functions return?

- (a) an object of class 'lattice'
- (b) an object of class 'plot'
- (c) nothing; only a plot is made
- (d) an object of class 'trellis'

What is produced by the following R code?

```
library(nlme)
library(lattice)
xyplot(weight ~ Time | Diet, BodyWeight)
```

- (a) A set of 3 panels showing the relationship between weight and time for each rat.
- (b) A set of 3 panels showing the relationship between weight and time for each diet.
- (c) A set of 16 panels showing the relationship between weight and time for each rat.
- (d) A set of 11 panels showing the relationship between weight and diet for each time.

> summary(BodyWeight)

```
weight
                      Time
                                      Rat
                                                Diet
       :225.0
                Min.
                        : 1.00
                                 2
                                         : 11
                                                1:88
Min.
1st Qu.:267.0
               1st Qu.:15.00
                                         : 11
                                 3
                                                2:44
Median :344.5
                Median :36.00
                                 4
                                                3:44
                                         : 11
Mean
       :384.5
                Mean
                        :33.55
                                 1
                                         : 11
                                         : 11
3rd Qu.:511.2
                3rd Qu.:50.00
                                 8
       :628.0
                Max. :64.00
Max.
                                 5
                                         : 11
                                 (Other):110
```

```
> levels(BodyWeight$Diet)
[1] "1" "2" "3"
>
> levels(BodyWeight$Rat)
  [1] "2" "3" "4" "1" "8" "5" "6" "7"
  [9] "11" "9" "10" "12" "13" "15" "14" "16"
```

Which of the following functions can be used to annotate a panel in a multipanel lattice plot?

- (a) lines()
- (b) axis()
- (c) lpoints()
- (d) text()

Question 9

Which R code makes a plot with the Greek letter 'theta' in the title?

- (a) plot(0, 0, main = expression(theta))
- (b) plot(0, 0, main = "theta")
- (c) plot(0, 0, main = expression("theta")
- (d) plot(0, 0, main = substitute(theta))

The set.seed() command

Question 10

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

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

- (a) A vector with the numbers 3.3, 2.5, 0.5, 1.1, 1.7
- (b) A vector with the numbers 1, 4, 1, 1, 5
- (c) It is impossible to tell because the result is random
- (d) A vector with the numbers 1, 1, 2, 4, 1

The rpois() function is related to generating random numbers. Therefore option (c) would seem like a plausible answer. However the command is preceded by the set.seed(1) command.