

## Assignment 2 - Lattice Plots

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Install MASS package for additional datasets and load the package using the library() command

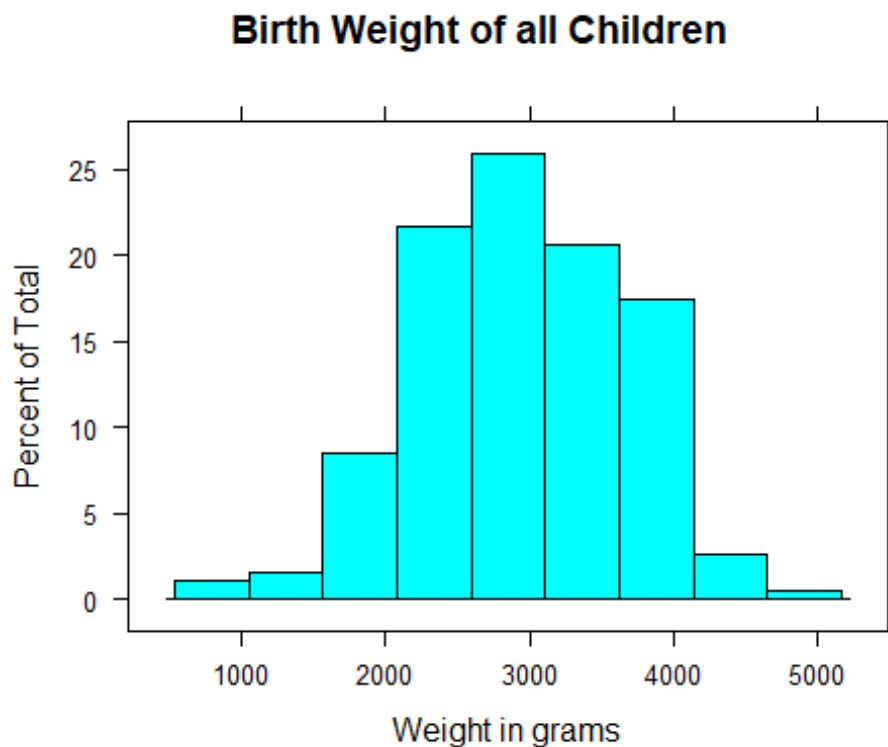
```
install.packages('MASS')  
library(MASS)
```

In MASS package there is a dataset **birthwt**. This dataset has the birth weight of child and the information related to mother (such as age, race, smoke etc).

### Question 1:

Using the Lattice Plot commands, plot the histogram of birth weights: (Dataset used or this plot is **birthwt**, which is available in MASS package)

```
library('lattice')  
histogram(~ bwt, data = birthwt, main = "Birth Weight of all Children", xlab  
= "Weight in grams")
```

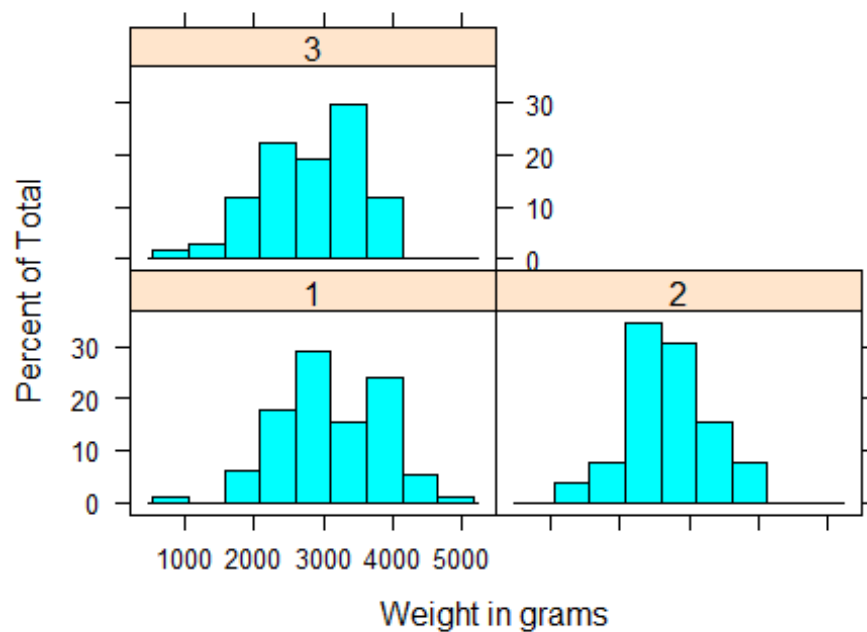


## Question 2:

Draw the following plots to see if there is any difference in the birth weights by the race of mothers?

```
histogram(~ bwt | factor(race), data = birthwt, main = "Birth Weight Children  
by Mothers Race:(1 = white, 2 = black, 3 = other)", xlab = "Weight in grams")
```

**Birth Weight Children by Mothers Race:(1 = white, 2 = black, 3 = other)**

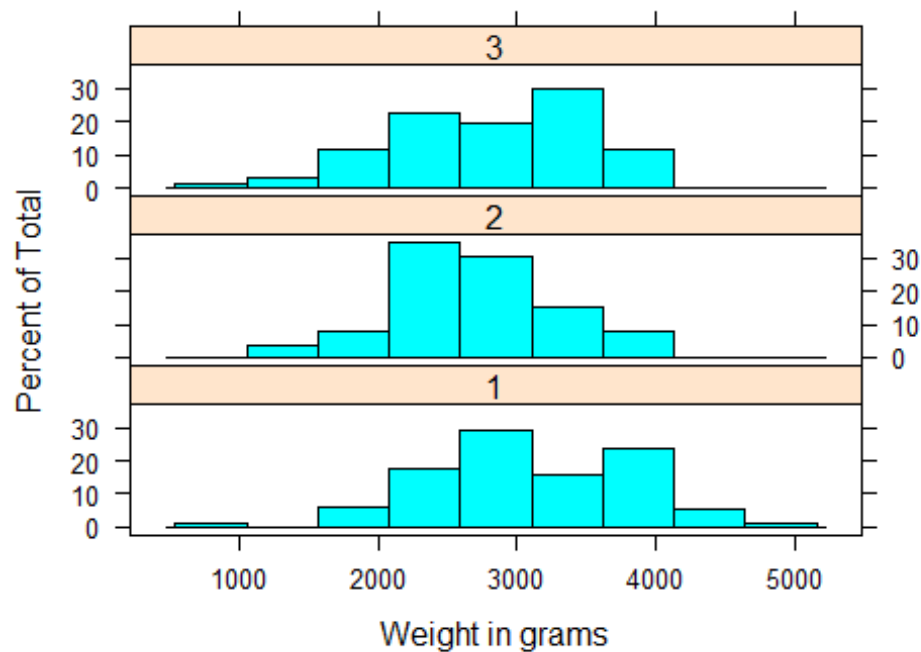


## Question 3:

Draw the above plot in a single column (in a vertical format)

```
histogram(~ bwt | factor(race), data = birthwt, layout = c(1,3), main =  
"Birth Weight Children by Mothers Race:(1 = white, 2 = black, 3 = other)",  
xlab = "Weight in grams")
```

## ght Children by Mothers Race:(1 = white, 2 = black, 3

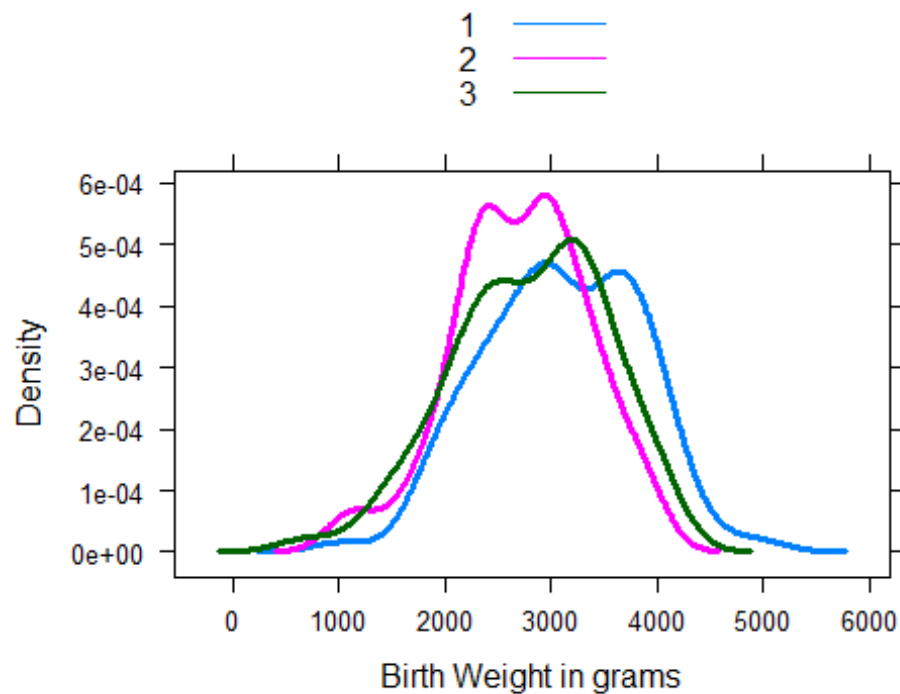


### Question 4:

Draw the density plot by race in a single window

```
densityplot( ~ bwt, group = factor(race), data = birthwt, main = "Weight of  
Child by mother's race (1 = white, 2 = black, 3 = other)", xlab = "Birth  
Weight in grams", auto.key = TRUE, plot.points = FALSE, lwd = 3)
```

Birth Weight of Child by mother's race (1 = white, 2 = black, 3 = c



**Hints:** 1. You can remove the dots at the bottom of the densityplot using the argument `plot.points = FALSE`

2. You can make the lines thicker by using the line width argument `lwd`. In the above plot I have used `lwd = 3`