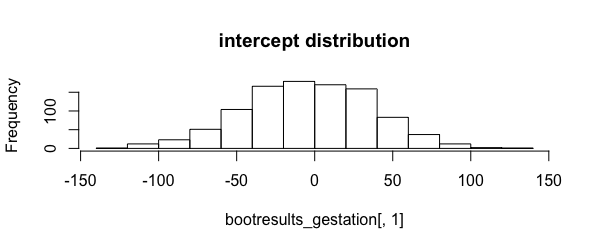
## The final model is wt...7 ~ gestation + smoke + ht + drace + parity + dht

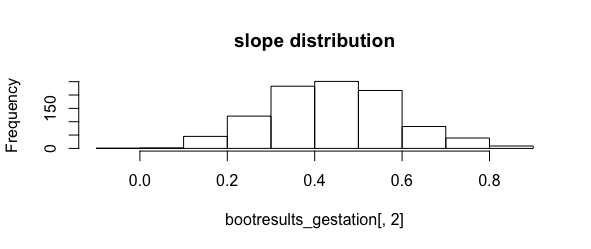
##Use the final model to bootstrap to generate the confidence interval of intercept and slope of explanatory variables

#Gestation

#Store the regression coefficients of gestation

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters





#generate the best guess of parameter

> c(mean(bootresults\_gestation[,1]), mean(bootresults\_gestation[,2]))

[1] -4.5413315 0.4422745

> #the CIs for these

> rbind(quantile(bootresults\_gestation[,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_gestation[,2], probs = c(0.025, 0.975)))

2.5% 97.5%

[1,] -88.3439820 72.8570934

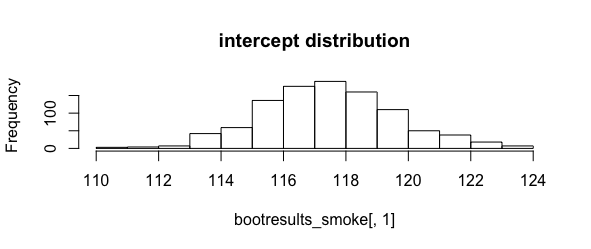
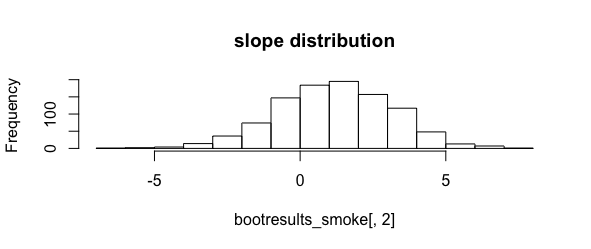
[2,] 0.1712494 0.7496133

\*1 is intercept, 2 is slope

#smoke

#store the regression coefficients of smoke

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters



#best guess of paramaters

> c(mean(bootresults\_smoke[,1]), mean(bootresults\_smoke[,2]))

[1] 117.450745 1.167277

# the CIs for these

> rbind(quantile(bootresults\_smoke[,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_smoke[,2], probs = c(0.025, 0.975)))

2.5% 97.5%

[1,] 113.391492 121.988017

[2,] -2.722916 4.836771

#ht

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters





> #generate the best guess of the parameters

> c(mean(bootresults\_ht[,1]), mean(bootresults\_ht[,2]))

[1] 78.685542 0.622012

> rbind(quantile(bootresults\_ht[,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_ht[,2], probs = c(0.025, 0.975)))

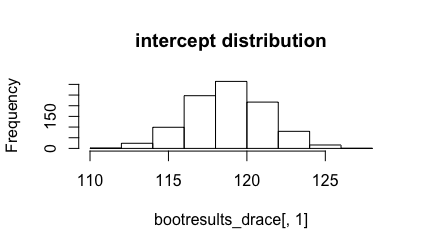
2.5% 97.5%

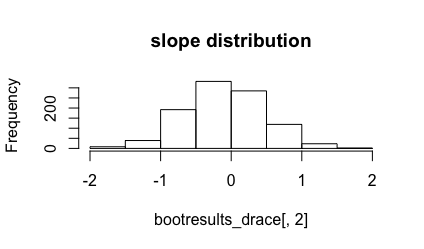
[1,] -3.1322960 163.509819

[2,] -0.7120348 1.904878

#drace

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters





> #generate the best guess of parameters

> c(mean(bootresults\_drace [,1]), mean(bootresults\_drace [,2]))

[1] 118.814503 -0.100638

> # the CIs for these

> rbind(quantile(bootresults\_drace [,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_drace [,2], probs = c(0.025, 0.975)))

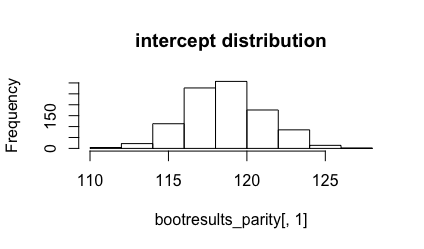
2.5% 97.5%

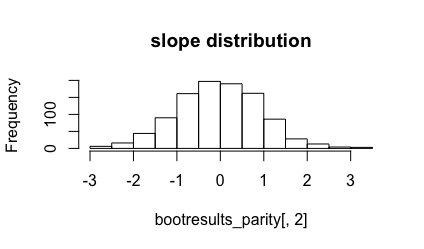
[1,] 113.936799 123.6442393

[2,] -1.218057 0.9944519

#parity

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters





> #generate the best guess of parameters

> c(mean(bootresults\_parity [,1]), mean(bootresults\_parity [,2]))

[1] 118.59611072 -0.04775608

> # the CIs for these

> rbind(quantile(bootresults\_parity [,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_parity [,2], probs = c(0.025, 0.975)))

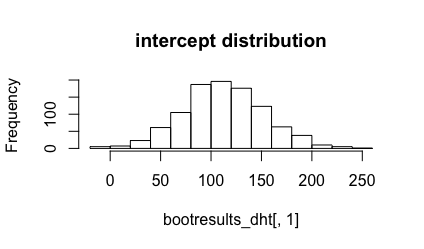
2.5% 97.5%

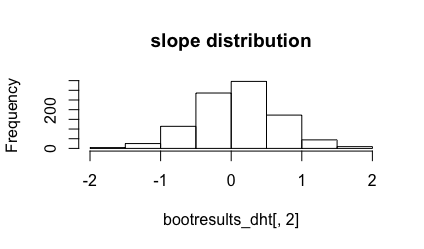
[1,] 113.962033 123.340196

[2,] -1.925032 1.874971

#dht

#Regression bootstrap coefficients- the empirical sampling distribution for the parameters





> #generate the best guess of parameters

> c(mean(bootresults\_dht [,1]), mean(bootresults\_dht [,2]))

[1] 112.26668046 0.08847787

> rbind(quantile(bootresults\_dht [,1], probs = c(0.025, 0.975)),

+ quantile(bootresults\_dht [,2], probs = c(0.025, 0.975)))

2.5% 97.5%

[1,] 32.972485 190.819954

[2,] -1.016431 1.208047

The confidence interval of slope of each explanatory variables indicate whether they have significant effects on response variable, i.e. wt…7