

Chapter 18: 1, 2, 5, 7, 27,28

- Any data you need from the supplement can be found at <http://bcs.whfreeman.com/pbs/>. Click on data sets. You need to save the files (the ones you want to use, not all of them) into the same folder where R lives. This might be called "Statistics" on your user space. To input a file into R, for example:

```
data<-read.table("file.txt",header=T,sep="\t")
```

- Basic bootstrapping instructions:

```
obs.stat<-median(heroin[,4]) # 367.5
obs.stat2<-mean(heroin[,4],trim=.25) # 378.3
test.stat<-c()
test.stat2<-c()

heroin.rs<-sample(heroin[,4],238,replace=T)
median(heroin.rs)
mean(heroin.rs,trim=.25)

for (i in 1:1000){

heroin.rs<-sample(heroin[,4],238,replace=T)

test.stat<-c(test.stat,median(heroin.rs))
test.stat2<-c(test.stat2,mean(heroin.rs,trim=.25))
}
```

- Describing the bootstrap distribution:

```
par(mfcol=c(2,3))
hist(heroin[,4])
hist(heroin.rs)
hist(test.stat)
qqnorm(test.stat)
qqline(test.stat)
hist(test.stat2)
qqnorm(test.stat2)
qqline(test.stat2)

mean(test.stat) # 374.522
sd(test.stat) # 33.281
mean(test.stat2) # 378.040
sd(test.stat2) # 23.407
```