

CJ Young

STAT 3600

Dr Peterson

Online Assignment 1

```
> #compute the distribution mean
> EX<-1*.1+2*.3+3*.1+4*.3+5*.2
> EX<-1*.1+2*.3+3*.1+4*.3+5*.2
> #compute the distribution variance
> #EX=3.2
> EX2<-1*.1+4*.3+9*.1+16*.3+25*.2
> #VarX<-EX2 - EX^2
> #VarX=1.76
> VarX<-EX2-EX^2
> x<-c(1,2,2,2,3,4,4,4,5,5)
> x_i<-c(4,5,1,2,4,2)
> #compute sample mean
> mean(x_i)
[1] 3
> #compute sample variance
> var(x_i)
[1] 2.4
> x_r<-sample(x,100,replace=TRUE,prob=NULL)
> mean(x_r)
[1] 2.96
> #compute sample variance for the sample size 100
> var(x_r)
```

[1] 1.816566

```
> #draw density histograms for x, x_i and x_r
```

```
> hist(x,prob=TRUE,xlim=c(0,6)breaks=6)
```

Error: unexpected symbol in "hist(x,prob=TRUE,xlim=c(0,6)breaks"

```
> hist(x_i,prob=TRUE,xlim=c(0,6),breaks=6)
```

```
> hist(x_r,prob=TRUE,xlim=c(0,6),breaks=6)
```



