```r
#AGYEMANG ERIC
#MAT 455 HMW4 CODES
#PROBLEM 2.26
p<-matrix(c(0,0,1/16, 0,0,0,8/13,3/16,1/11,1/8,0,3/13,3/8,4/11,1/2,0,1/13,1/4,5/11,1/8,1,1/13,1/8,1/11,1/4), ncol=5,
nrow=5)
states <- c("80","135","139","445","No")
rownames(p) <- states
colnames(p) <- states
p
init <- c(0,0,0,0,1)
init%*%p%*%p
mat<-p%*%p
for (i in 1:1000){mat<-mat%*%p%*%p}
mat

#PROBLEM 3.5
A<-matrix(c(0,3/4,0,0,1/4,1/4,0,0,0,3/4,0,0,1,0,0,0,0,0,1,0,3/4,1/4,0,0,0), ncol=5, nrow=5)
A
mat_1<-A%*%A
for (i in 1:1000000){mat_1<-mat_1%*%A}
mat_1
```