

Answer

1)

```
source("prob.R")
```

a)

```
gbinom(20, 0.3)
```

b)

```
gbinom(100, 0.5, a = 45, b = 55, scale = T)
```

c)

```
dbinom(10, 100, 0.1)
```

d)

```
qbinom(0.9, 200, 0.3)
```

```
gbinom(200, 0.3, scale = T, quantile = 0.9)
```

e)

```
rbinom(20, 10, 0.5)
```

ii)

a)

```
1 - pnorm(100, 145, 22)
```

```
gnorm(145, 22, a = 100)
```

b)

```
pnorm(150, 145, 22) - pnorm(120, 145, 22)
```

```
gnorm(145, 22, a = 120, b = 150)
```

c)

```
pnorm(150, 145, 22)
```

```
gnorm(145, 22, b = 150)
```

d)

```
qnorm(0.75, 145, 22)
```

```
gnorm(145, 22, quantile = 0.75)
```

e)

```
ab = qnorm(c(0.025, 0.975), 145, 22)
```

```
ab
```

```
gnorm(145, 22, a = round(ab[1], 1), b = round(ab[2], 1))
```

2)

```
?rmultinom
```

```
rmultinom(1, 18000, c(1/6, 1/6, 1/6, 1/6, 1/6, 1/6))
```

```
rmultinom(10, size = 12, prob=c(0.1, 0.2, 0.8, 0.6))
```

```
y<-0;
```

```
for(i in 1:18)
```

```
{y[i]<-sample(c(1,2,3,4,5,6),1)}
```

```
y
```

```
table(y)
```

```
y<-0;
```

```
for(i in 1:18000)
```

```
{y[i]<-sample(c(1,2,3,4,5,6),1)}
```

```
table(y)
```

```
(table(y)/18000)*100
```

3)

```
?rbinom()
```

```
x<-rbinom(8,1,0.8)
```

```
x
```

```
table(x)
```

```
rbinom(1,8,0.8)    //total number of successs
```

```
rbinom(10,8,0.8)
```

4)

```
a<-rbinom(60,6,0.5)
```

```
a
```

```
table(a)
```

5)

```
t<-rmultinom(1,2000,c(1/6,1/6,1/6,1/6,1/6,1/6))
```

```
t
```

```
s<-(t/2000)*100
```

```
s
```

```
s/100
```

6)

```
dbinom(7:12,20,.68)
```