

# Worksheet 3

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```
library(dplyr)
set.seed(123)
#task 1
a1<-dbinom(6,10,0.5)
print(a1)

## [1] 0.2050781
b1<-dbinom(4,10,0.5)+dbinom(5, size=10, 0.5)
print(b1)

## [1] 0.4511719
c1<-pbinom(3,10,0.5)
print(c1)

## [1] 0.171875
d1<-sum(dbinom(6:10,10,0.5))
print(d1)

## [1] 0.3769531
#P(X>=x) DNE P(X>x)
dAlt1 <- pbinom(5,10,0.5,lower.tail = F)

a2 = pnorm(-2.15)
print(a2)

## [1] 0.01577761
b2 = pnorm(2.54,lower.tail = F)
print(b2)

## [1] 0.005542623
c2 = pnorm(1.96)-pnorm(-1.96)
print(c2)

## [1] 0.9500042
d2 = qnorm(0.025)
print(d2)

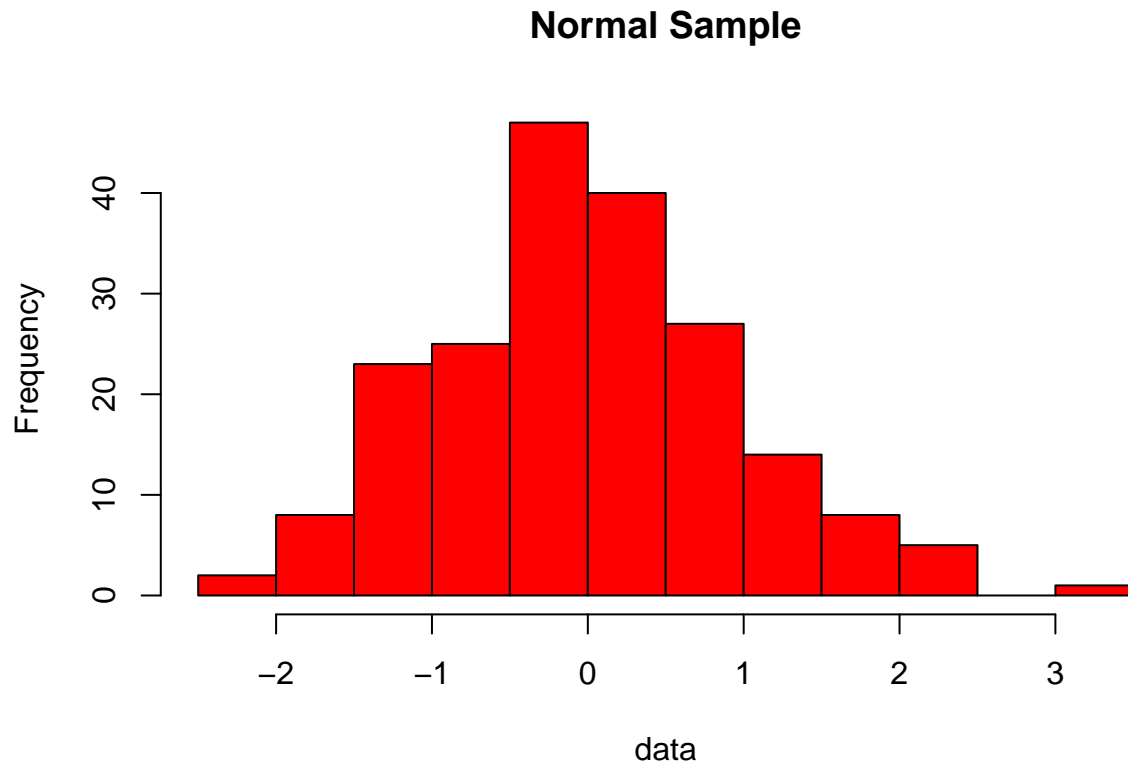
## [1] -1.959964
e = qnorm(0.05,lower.tail = F)
print(e)
```

```
## [1] 1.644854
```

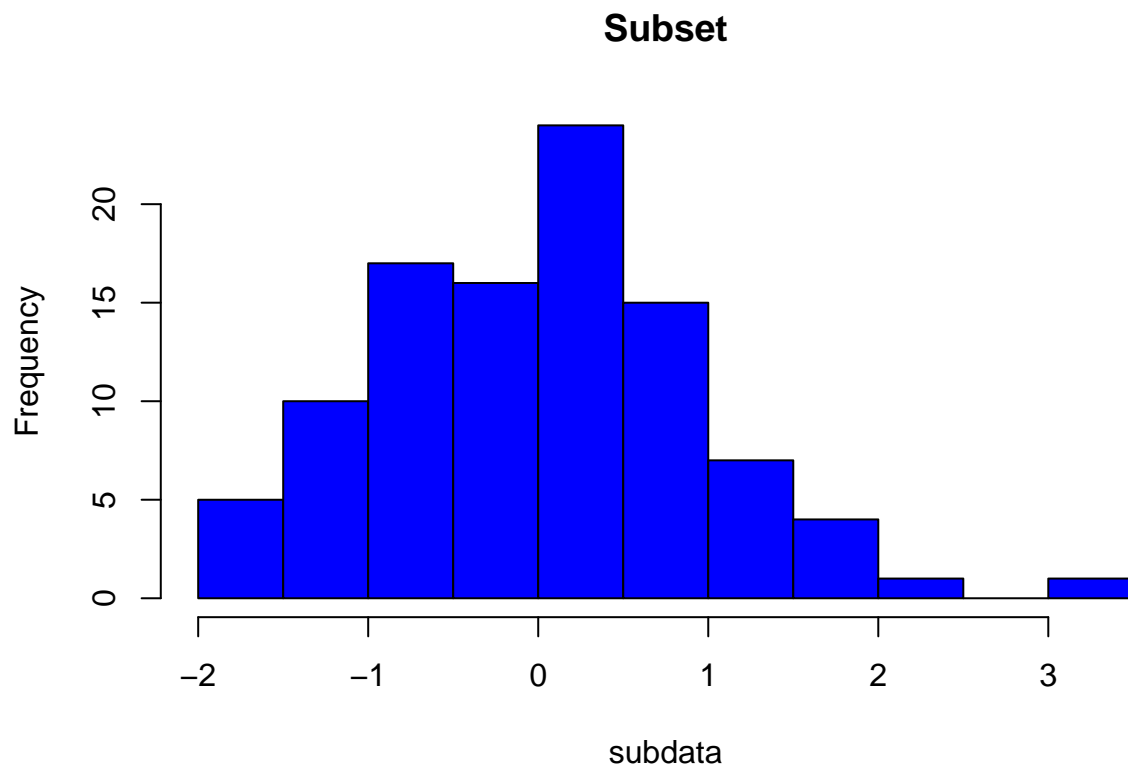
```
f = qnorm(0.01/2)#symmetry  
print(f)
```

```
## [1] -2.575829
```

```
data <- rnorm(200)  
hist(data,main = "Normal Sample",col = "red")
```



```
subdata = sample(data,100,replace = T)  
hist(subdata,main = "Subset", col = "blue")
```



```
mean(subdata)
```

```
## [1] -0.009979655
```

```
sd(subdata)
```

```
## [1] 0.9254773
```

```
#print(as.list(.GlobalEnv))
```

```
as.table(a1,b1,c1,d1,a2,b2,c2,d2,e,f)
```

```
##           A
```

```
## 0.2050781
```