

Safal Das Biswas Stat HW.

1a, 1b, 2a, 2b, 3(combined answer)

```
> NVar = c(1:1000)
```

```
> for (i in 1:1000)
```

```
+{
```

```
+ NVar[i] = var(rnorm(4))
```

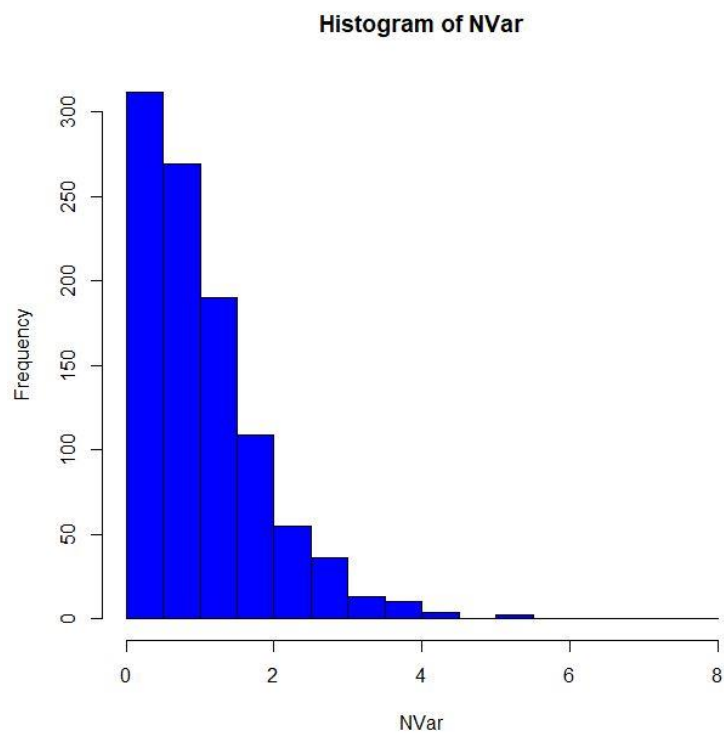
```
+}
```

```
> Chisq = rchisq(1000,3)/3
```

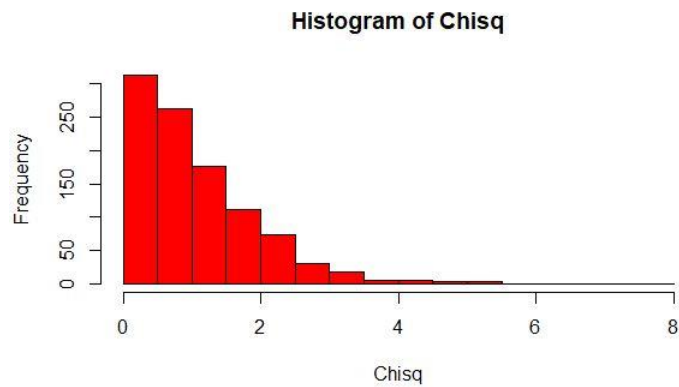
```
> windows()
```

```
> histv = hist(NVar, c(0:16)/2, col = "blue")
```

```
> number_of_obs_Var = histv$density * 1000
```



```
> histc = hist(Chisq,c(0:16)/2,col = "red")
> number_of_obs_Chisq = histc$density * 1000
```



```
> difference_of_vectors = number_of_obs_Var - number_of_obs_Chisq
```

```
>number_of_obs_Var
```

```
[1] 624 538 380 218 110 72 26 20 8 0 4 0 0 0 0 0
```

```
>number_of_obs_Chisq
```

```
[1] 626 526 352 222 146 60 36 10 10 6 6 0 0 0 0 0
```

```
> difference_of_vectors
```

```
[1] -2 12 28 -4 -36 12 -10 10 -2 -6 -2 0 0 0 0 0
```