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RNORM function at different values mini TP 05

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Contents

Chapter 1

rnorm tests

Here we will be testing **rnorm** function with a mean of 1 and a standard deviation of 2 and at a different size of n 100,1000,10000,100000.

1.1 Testing rnorm at n=100 ?

```
a1 = rnorm(100,1,2) # rnorm with 100 size of randomly generated
    values
plot(density(a1,bw=0.5))
```

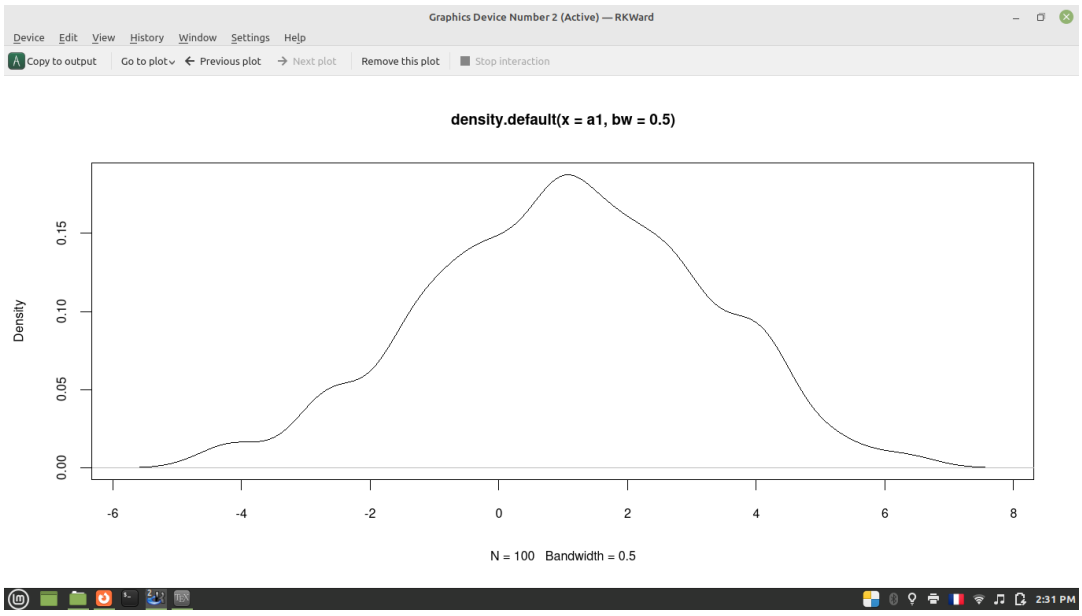

FIGURE 1.1: rnorm at 100.

1.2 Testing rnorm at n=1000 ?

```
a2 = rnorm(1000,1,2) # rnorm with 1000 size of randomly generated
    values
plot(density(a2,bw=0.5))
```

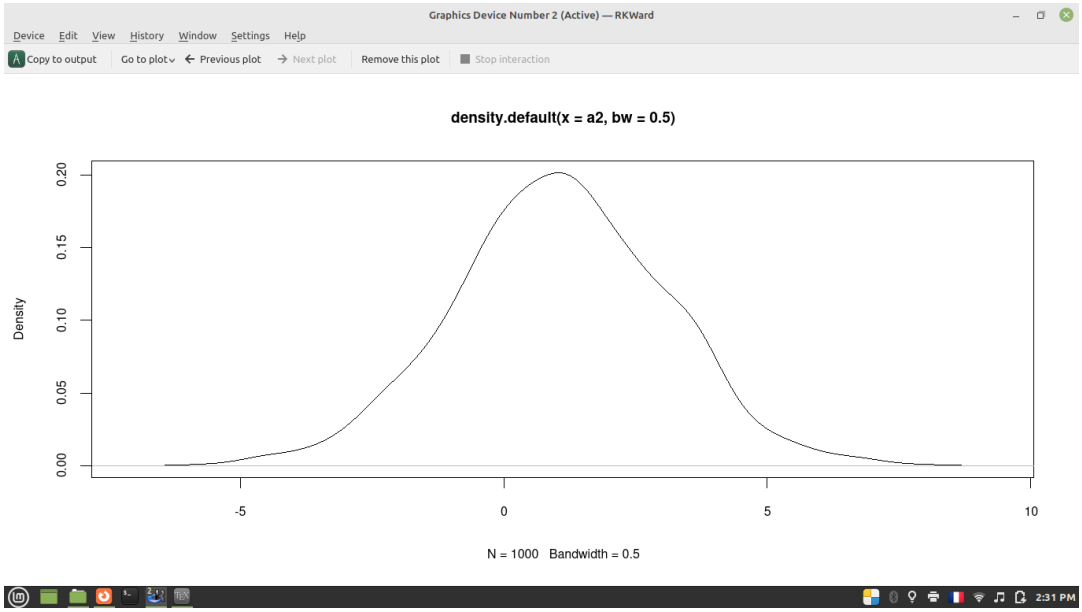

FIGURE 1.2: rnorm at 1000.

1.3 Testing rnorm at n=10000 ?

```
5 a3 = rnorm(10000,1,2) # rnorm with 10000 size of randomly generated
      values
6 plot(density(a3,bw=0.5))
```

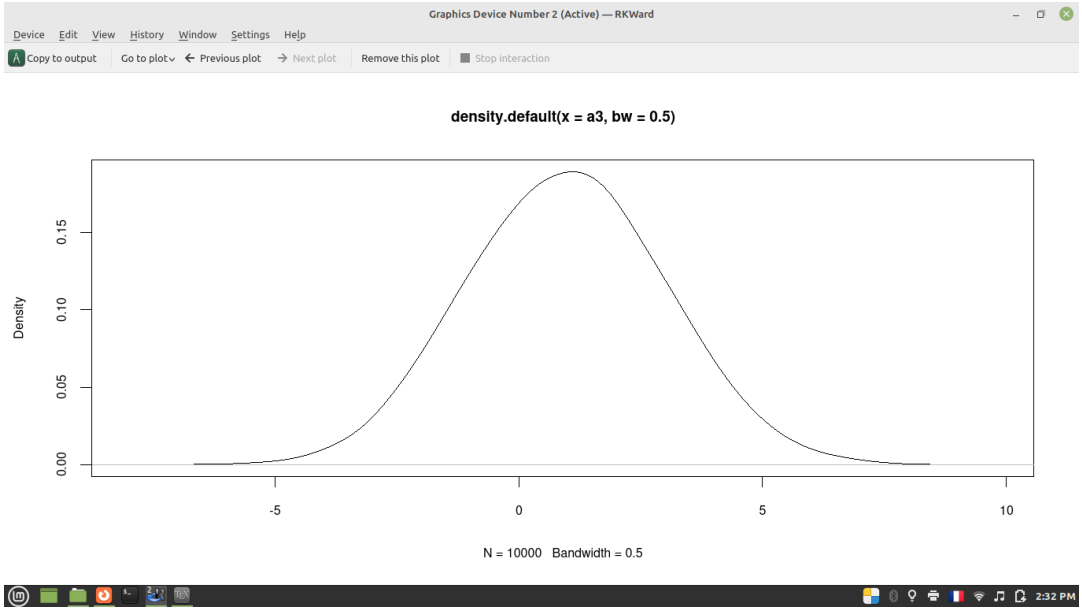

FIGURE 1.3: rnorm at 10000.

1.4 Testing rnorm at n=100000 ?

```
7 a4 = rnorm(100000,1,2) # rnorm with 100000 size of randomly
      generated values
8 plot(density(a4,bw=0.5))
```

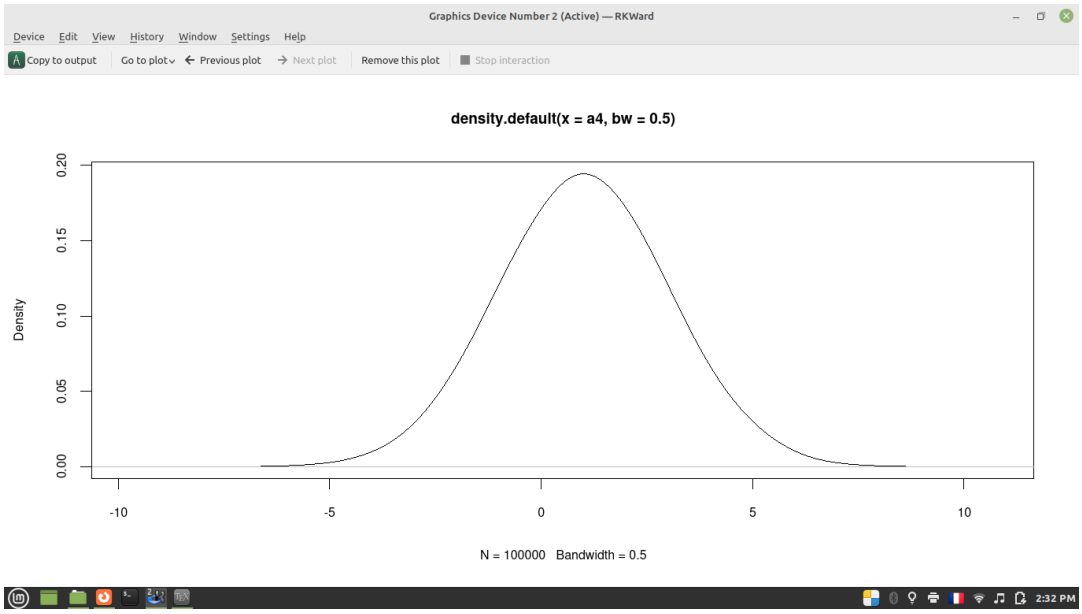

FIGURE 1.4: rnorm at 100000.

1.5 multiple plots with the help of par() function

```
9 par(mfrow=c(2,2)) # plotting 4 plots in one window
```

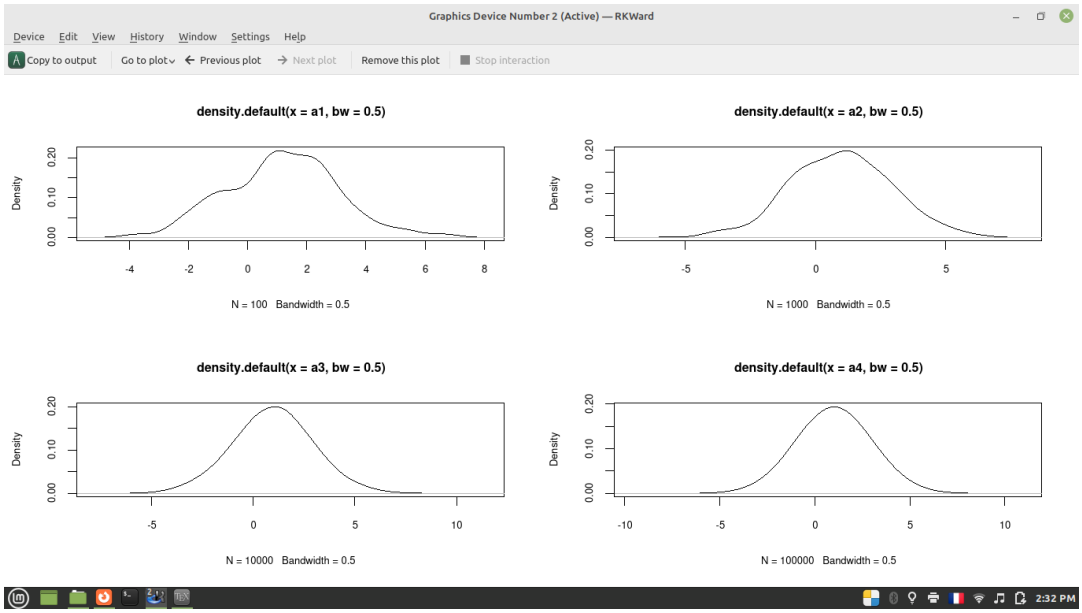

FIGURE 1.5: par function.

1.6 Conclusion

As we notice the more we increase the size of our sample test the more the curve converges to a normal distribution curve.

Appendix A

Appendix A

A.1 R code

```
par(mfrow=c(2,2)) # plotting 4 plots in one window

a1 = rnorm(100,1,2) # rnorm with 100 size of randomly generated values
plot(density(a1,bw=0.5))

a2 = rnorm(1000,1,2) # rnorm with 1000 size of randomly generated values
plot(density(a2,bw=0.5))

a3 = rnorm(10000,1,2) # rnorm with 10000 size of randomly generated values
plot(density(a3,bw=0.5))

a4 = rnorm(100000,1,2) # rnorm with 100000 size of randomly generated values
plot(density(a4,bw=0.5))
```