c(8999, 9999, 6399, 6799, 5499, 5999, 7999, 7989, 4999, 9099, 5199, 10499, 10349, 10999, 9999, 18524, 9475, 8899, 20899, 8999, 12349, 6899, 12999, 10599, 10799, 17999, 14849, 8445, 14849, 14259, 10529, 14249, 14249, 6099, 8999, 10529, 8899, 8279, 5299, 5499, 7599, 7699, 5699, 9799, 4699, 5399, 7999, 10799, 8199, 7399, 11499, 11399, 5299, 5599, 5699, 5799, 8099)

> median(x) #медіана

[1] 8899

> mean(x) #вибіркове середнє

[1] 9350.526

> prod(x)^(1/length(x)) #середнє геометричне

[1] 8750.857

> 1/mean(1/x) #середнє гармонійне

[1] 8222.657

> x <- c(8999, 9999, 6399, 6799, 5499, 5999, 7999, 7989, 4999, 9099, 5199, 10499, 10349, 10999, 9999, 18524, 9475, 8899, 20899, 8999, 12349, 6899, 12999, 10599, 10799, 17999, 14849, 8445, 14849, 14259, 10529, 14249, 14249, 6099, 8999, 10529, 8899, 8279, 5299, 5499, 7599, 7699, 5699, 9799, 4699, 5399, 7999, 10799, 8199, 7399, 11499, 11399, 5299, 5599, 5699, 5799, 8099)

> x

[1] 8999 9999 6399 6799 5499 5999 7999 7989 4999 9099 5199 10499 10349 10999 9999 18524 9475 8899 20899 8999 12349 6899 12999 10599 10799 17999 14849 8445 14849 14259 10529 14249 14249 6099 8999 10529 8899 8279

[39] 5299 5499 7599 7699 5699 9799 4699 5399 7999 10799 8199 7399 11499 11399 5299 5599 5699 5799 8099

> median(x)

[1] 8899

> mean(x)

[1] 9350.526

> median(x) #медіана

[1] 8899

> mean(x) #вибіркове середнє

[1] 9350.526

> prod(x)^(1/length(x)) #середнє геометричне

[1] 8750.857

> 1/mean(1/x) #середнє гармонійне

[1] 8222.657

> рудз(мфк)

Error in рудз(мфк) : could not find function "рудз"

> help(var)

starting httpd help server ... done

> var(x) #дисперсія

[1] 12923723

> sd(x) #середній квадрат відхилення

[1] 3594.958

> sd(x)/mean(x)\*100

[1] 38.44658

> sd(x)/mean(x)\*100 #коефіцієнт кореляції

[1] 38.44658

>

> instal.packages("moments")

Error in instal.packages("moments") :

could not find function "instal.packages"

> install.packages("moments")

Warning in install.packages("moments") :

'lib = "C:/Program Files/R/R-3.6.1/library"' is not writable

--- Please select a CRAN mirror for use in this session ---

trying URL 'https://cloud.r-project.org/bin/windows/contrib/3.6/moments\_0.14.zip'

Content type 'application/zip' length 56559 bytes (55 KB)

downloaded 55 KB

package ‘moments’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\Admin\AppData\Local\Temp\RtmpyS2J4l\downloaded\_packages

> quantile(x)

0% 25% 50% 75% 100%

4699 6399 8899 10799 20899

> quantile(x, probs = c(0.1, 0.9))

10% 90%

5459 14253

> iqr(x)

Error in iqr(x) : could not find function "iqr"

> IQR(x)

[1] 4400

> summary(x)

Min. 1st Qu. Median Mean 3rd Qu. Max.

4699 6399 8899 9351 10799 20899

> min(x)

[1] 4699

> max(x)

[1] 20899

> quantile(x, p = seq(0.1, 0.1))

10%

5459

> quantile(x,p=seq(0.1,0.1))

10%

5459

> library(moments)

> kurtosis(x)

[1] 4.118439

> skewness(x)

[1] 1.101117

> boxplot(x)

> quantile(x, p = seq(0, 1, 0.1))

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%

4699.0 5459.0 5839.0 7299.0 8039.0 8899.0 9669.4 10529.0 11319.0 14253.0

100%

20899.0