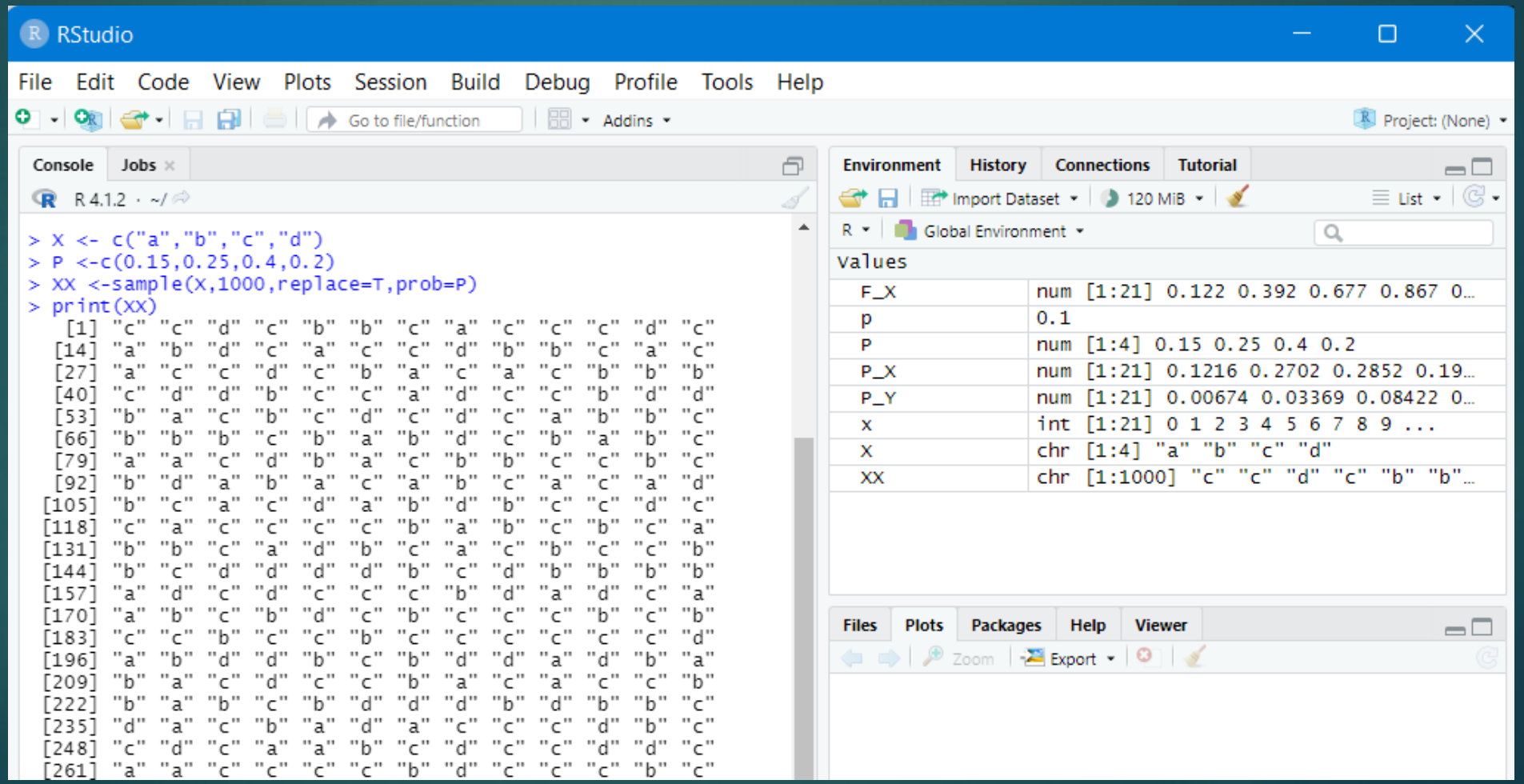
Compte-rendu TP1 Analyse de données

RÉALISATRICE: FATMA LARIBI GL3 GROUPE 2

Question 1

Enter the following vector X = (a, b, c, d), then use the command sample() to generate a sample of 1000 entries following the distribution p = (15%, 25%, 40%, 20%). Name your variable XX. We use the function c() to define the vectors



Question 2

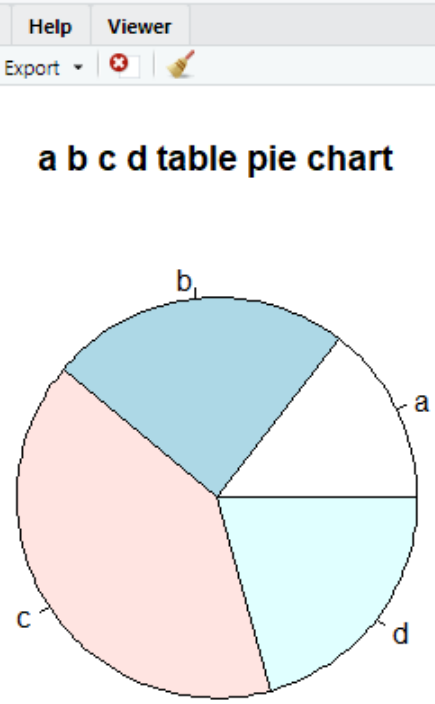
Use the command table() to table your statistical variable XX and name your table distribution XXT.

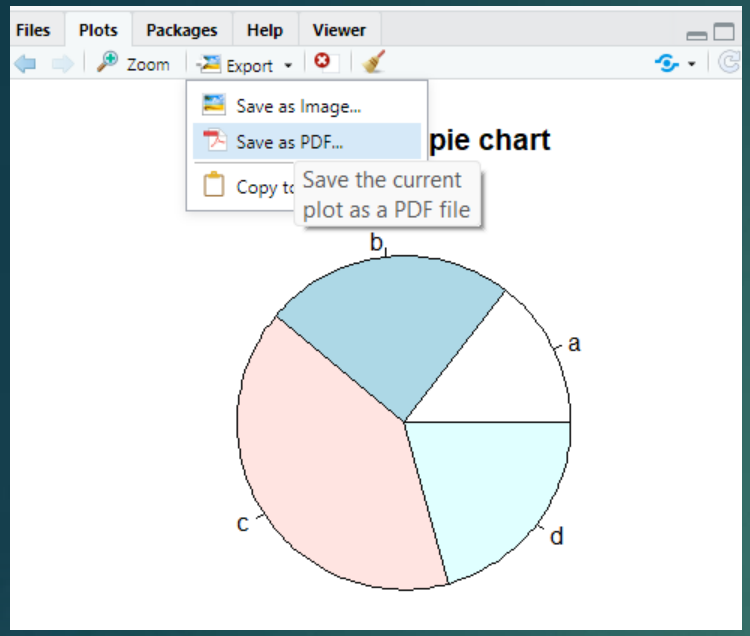
```
> XXT<- table(XX)
> print(XXT)
XX
  a   b   c   d
145 244 404 207
> 
```

Question 3

Use the command pie() to represent graphically XX into a pie chart and save your
graphic in a PDF format name your graph le "XXP.pdf".

```
> pie(XXT,labels=X,main="a b c d table pie chart")
```




Files
Plots
Packages
Help
Viewer
Zoom
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Save as Image...
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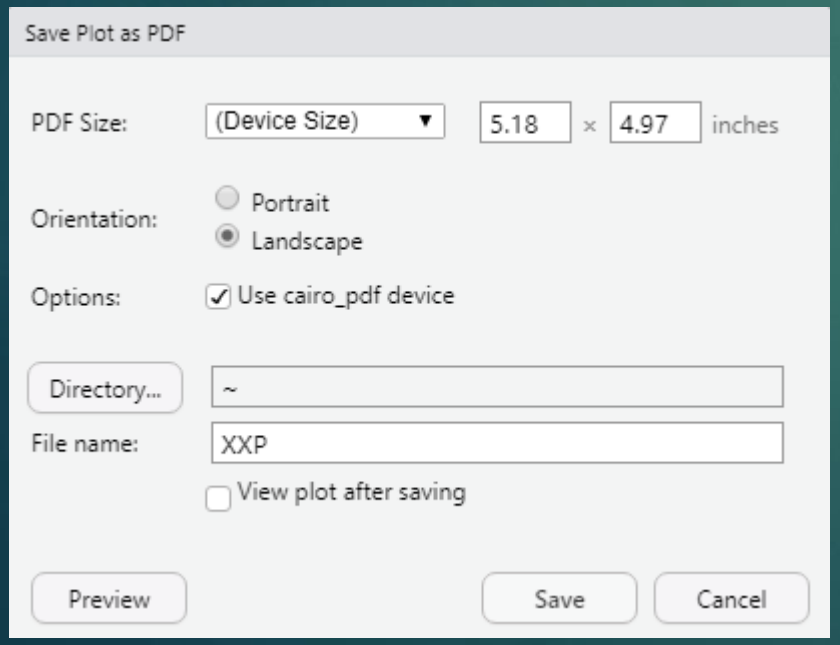
Copy to
Save the current plot as a PDF file
pie chart
b
a
c
d


Save Plot as PDF
PDF Size:
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Orientation:
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Options:
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View plot after saving
Preview
Save
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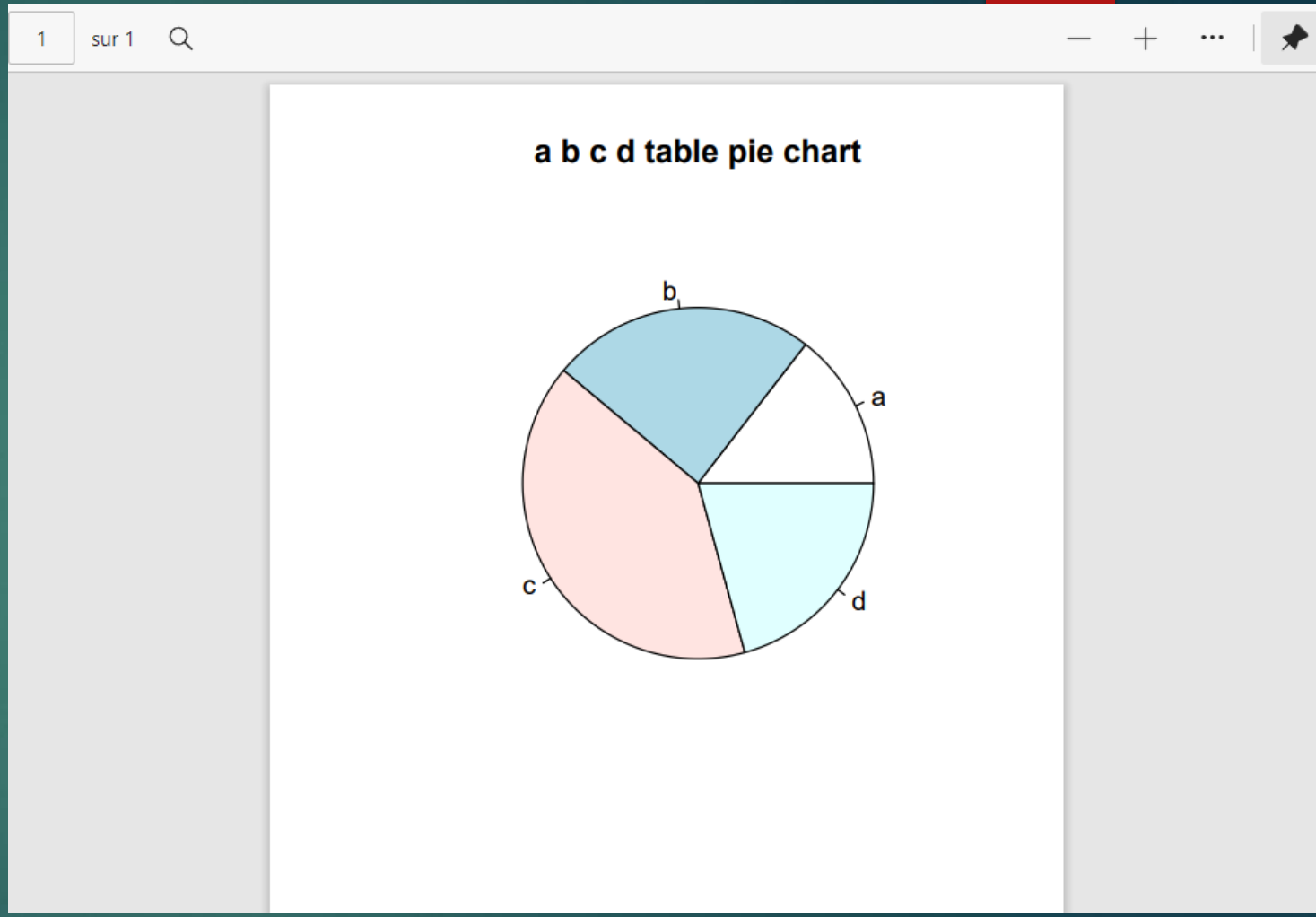
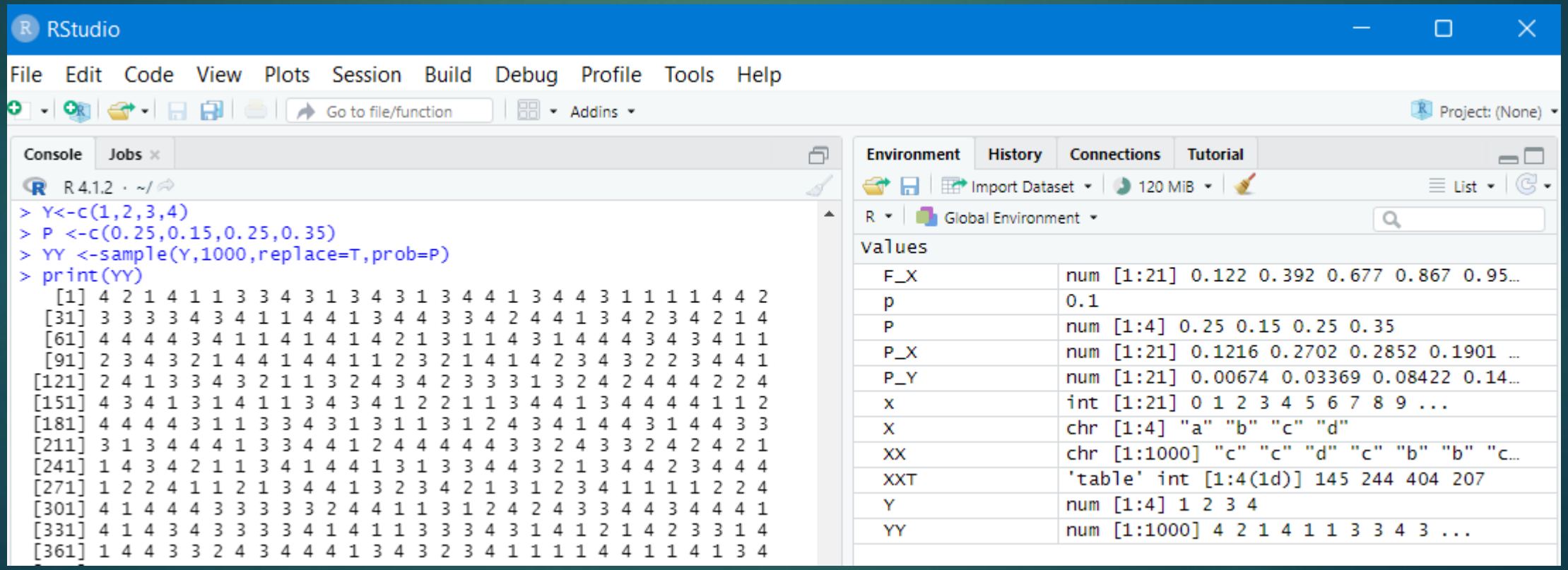

1
sur 1
a b c d table pie chart
b
a
c
d

Question 4

Enter the following vector Y = (1, 2, 3, 4), then use the command sample() to generate a sample of 1000 entries following the distribution given by p = (25%, 15%, 25%, 35%),

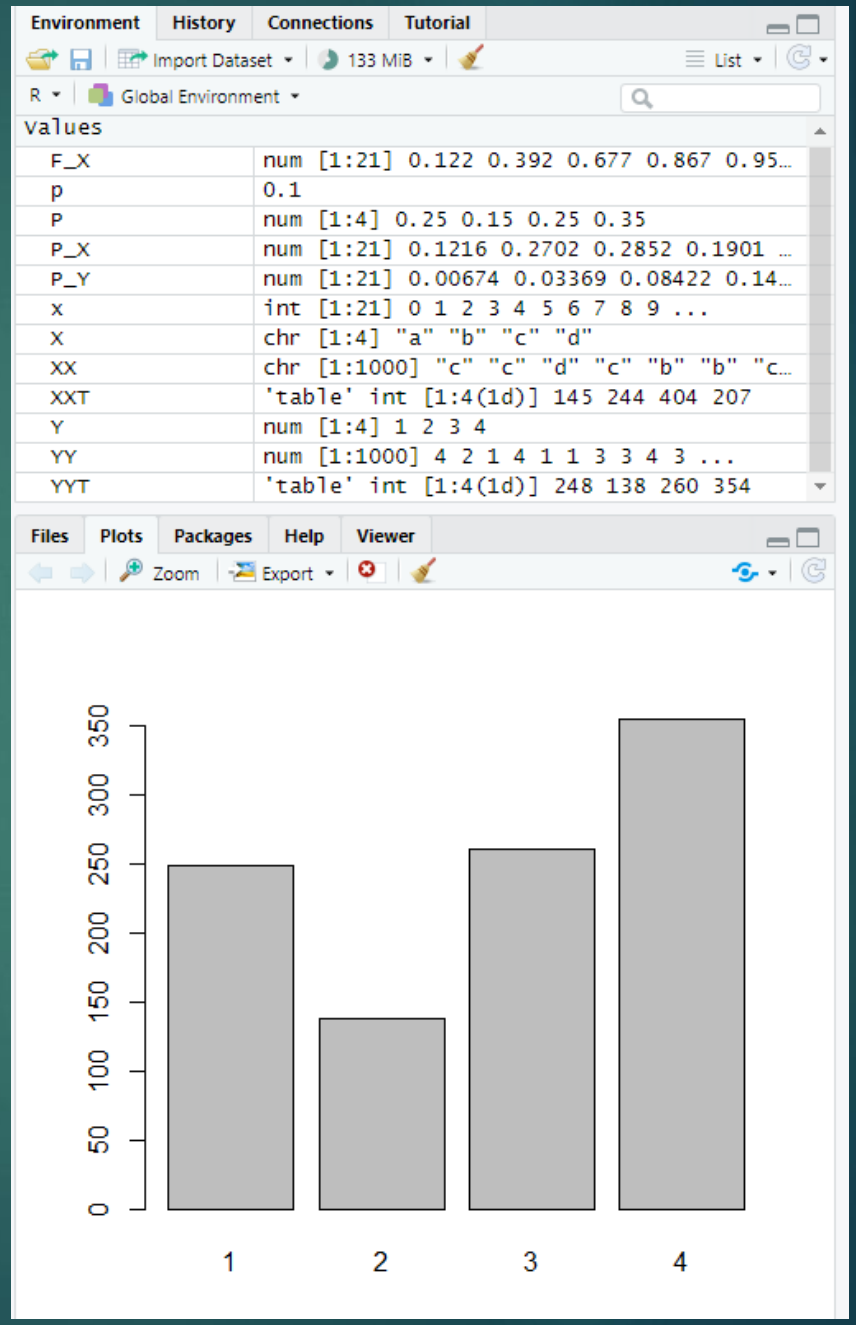
name your variable YY.



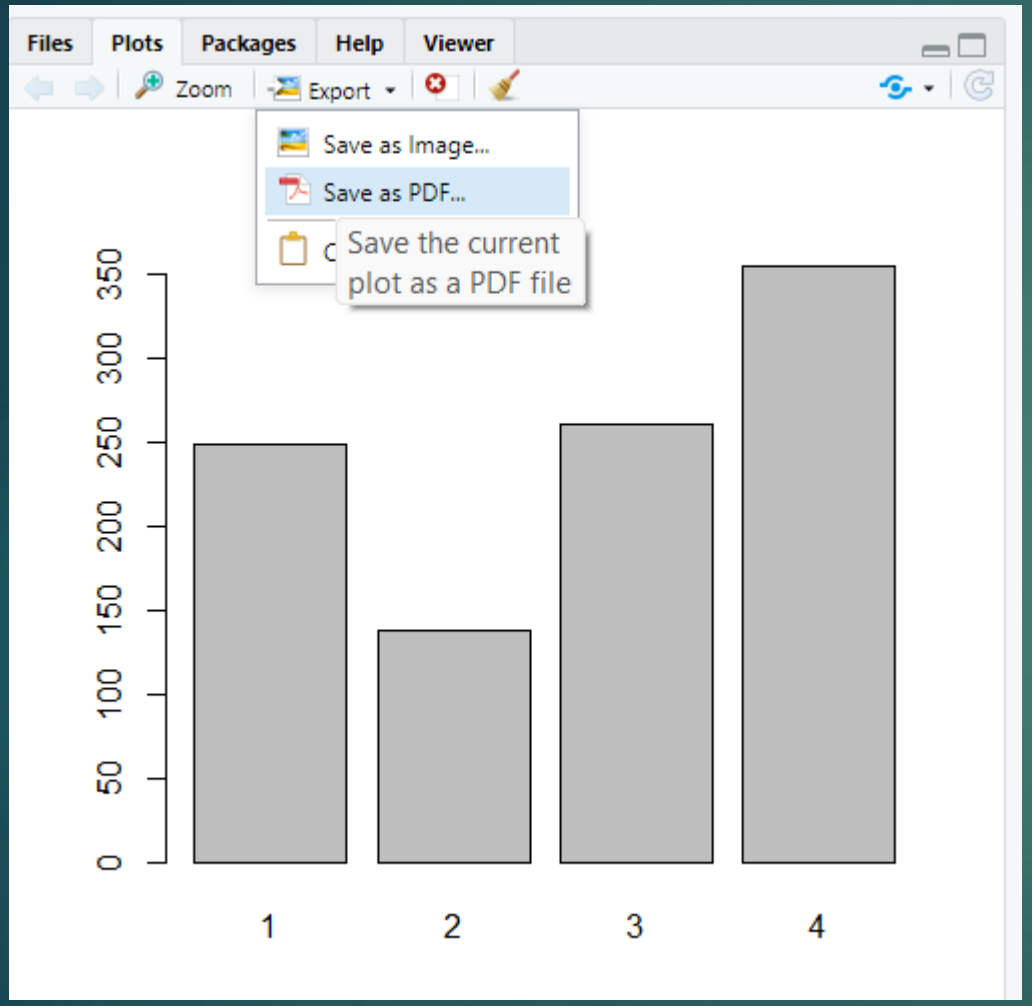
Question 5

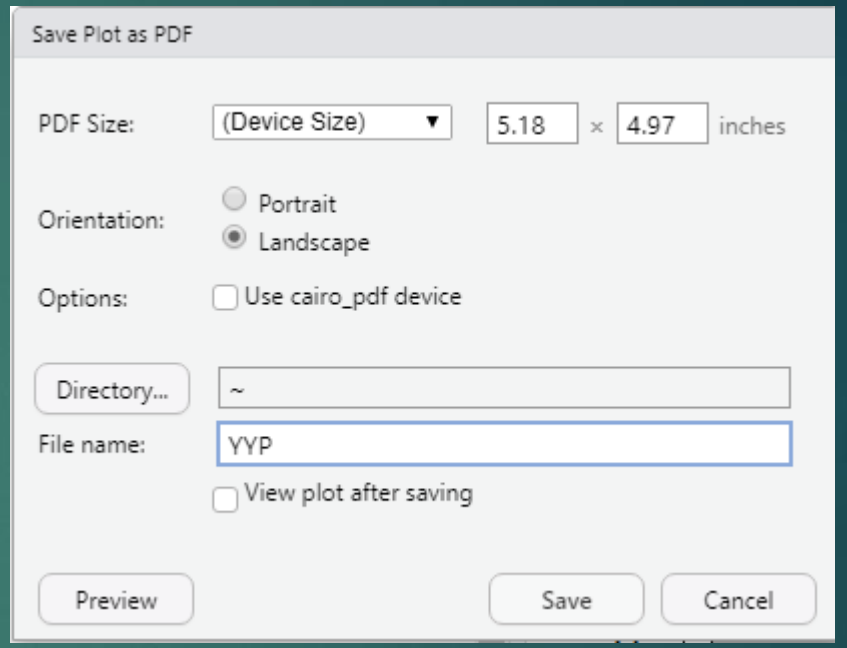
Table your data and plot the corresponding bar graph in a pdf le that you name "YYP.pdf".

```
> YYT<-table(YY)
> print(YYT)
YY
  1   2   3   4
248 138 260 354
> barplot(YYT)
>
```



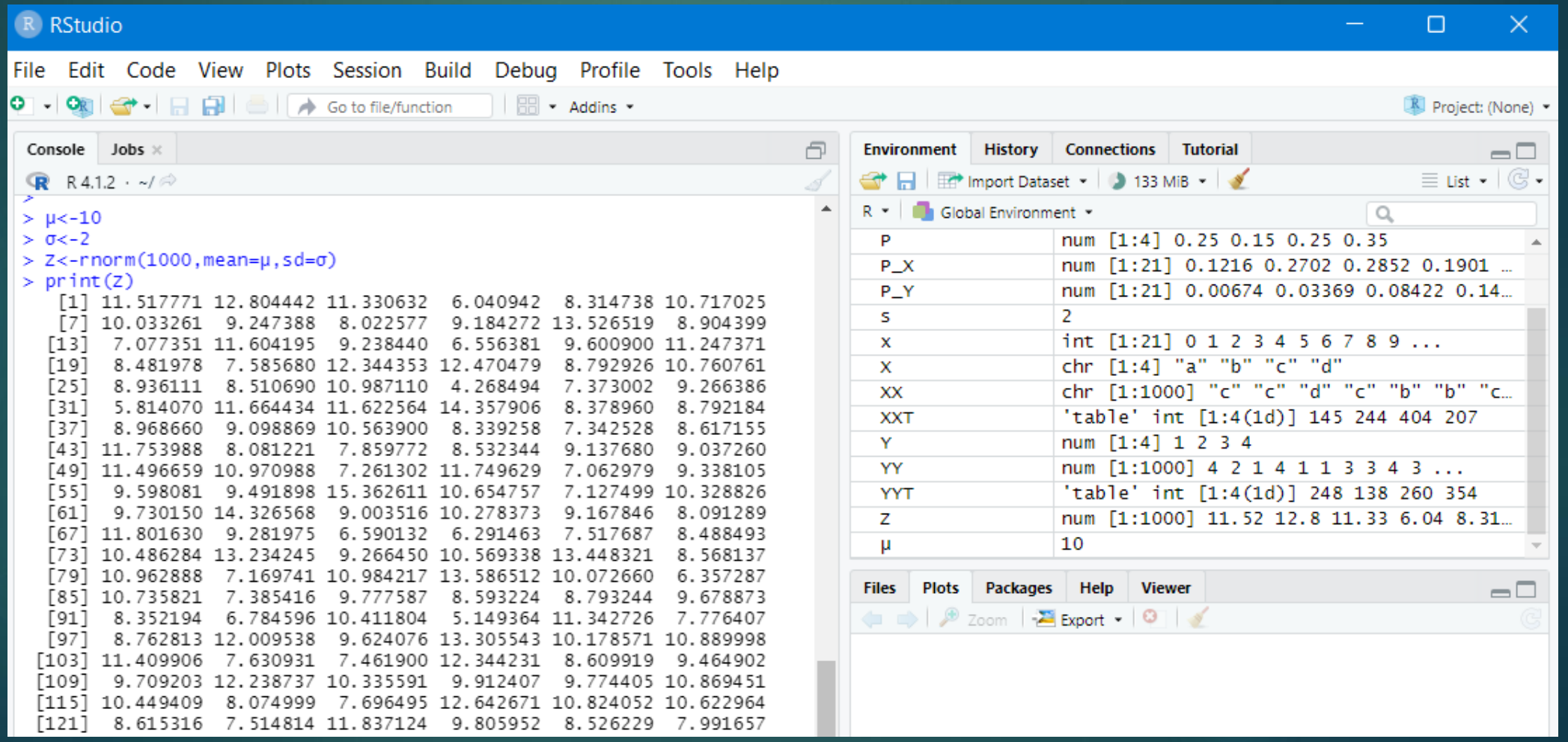
We export the bar plot the same way we did before





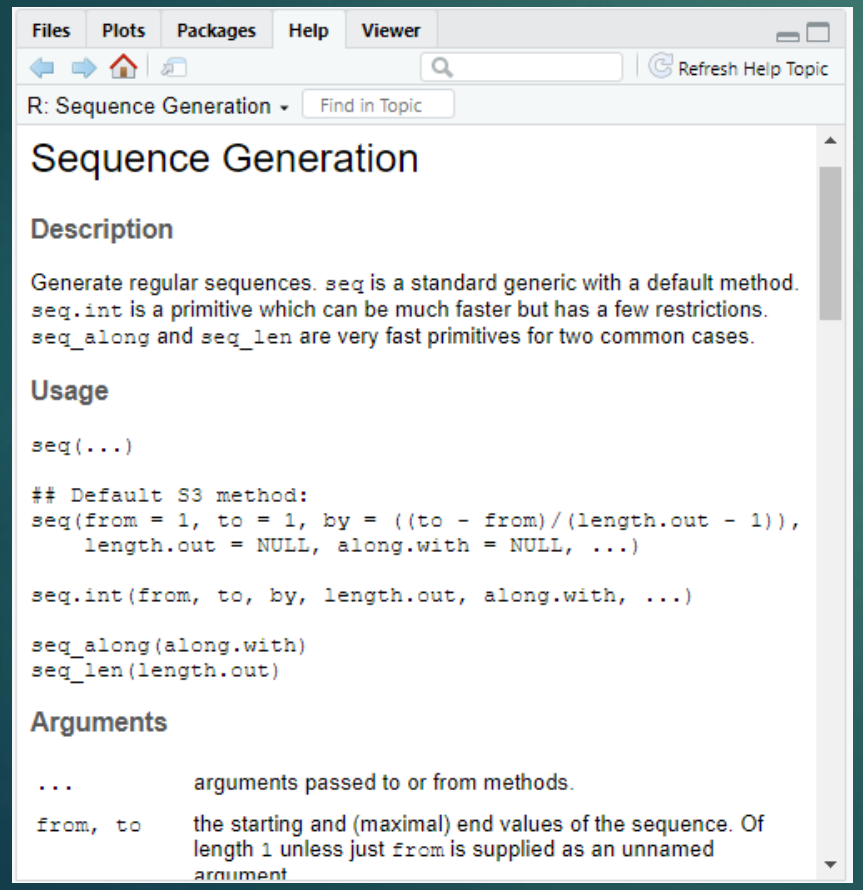
Question 6

Use the command rnorm() to generate 1000 entries following the normal distribution with mean μ = 10 and standard deviation σ = 2 and name the obtained statistical series Z.



Question 7

Use the command seq() to set up a sequence of equidistant points in the range of Z, name the obtained sequence "Z_e".
Use the command cut() to construct classes and build up the frequency distribution by using table which you apply on the output of cut().
Here we divided into 9 classes



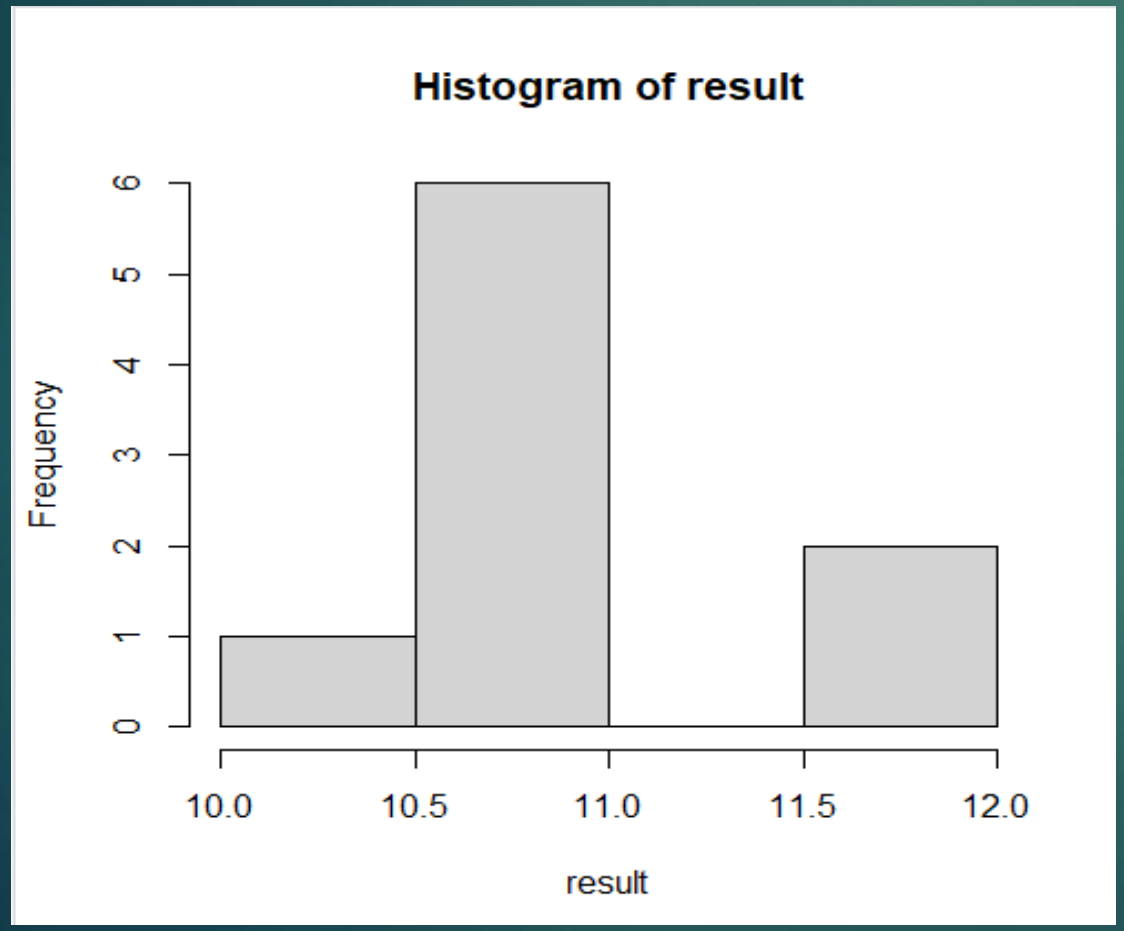
z	num [1:1000] 11.52 12.8 11.33 6.04 8.31…
z_e	num [1:100] 11.5 11.5 11.6 11.6 11.6 ...

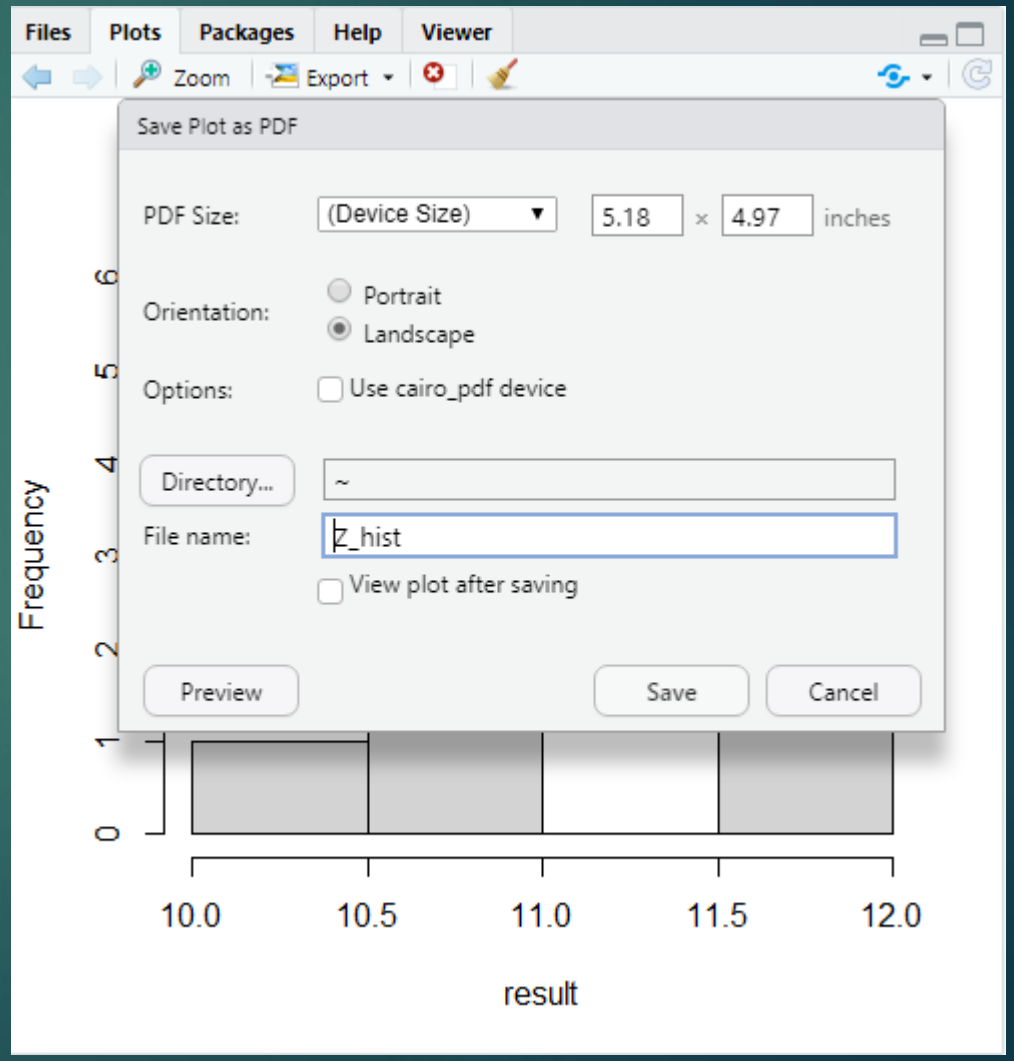
```
> z_e<-seq(from=z[1],to=z[1000],length.out=100)
> classes<- cut(z_e,9)
> result=table(classes)
> print(result)
classes
(11.5,11.8] (11.8,12.1] (12.1,12.4] (12.4,12.7]   (12.7,13]
         12          11          11          10          12
  (13,13.3] (13.3,13.6] (13.6,13.9] (13.9,14.2]
         11          11          11          11
```

Question 8

Use the command hist() to draw the corresponding histogram and save the obtained graph in a pdf format file "Z_hist.pdf".

```
> hist(result)
```





Thank you for your attention!