1-Fazendo a samples:

CPU:

1-

```
| Sample(Teste23$CPU.Total, 200) | Sample(Teste23$CPU.Total, 200)
```

2-

```
81.538460
                                                    7.031250
                                                                                  5.078125
                                                                                                                9.765625
                                                                                                                                           13.671875
                                                                                                                                                                            5.468750 91.015625
                                                                                                                                                                                                                                         5.769229
                                                                                                                                                                                                      91.015625
8.593750
5.468750
6.250000
15.234375
10.546875
20.312500
13.281250
14.453125
                                                                                                                                                                                                                                                                   85.546
12.457
9.009
7.049
87.500
5.468
11.328
17.578
7.812
                     9.765625 91.406250
6.538463 4.296875
8.593750 6.983173
5.859375 13.671875
                                                                              6.640625
10.156250
                                                                                                          11.183893
3.131199
                                                                                                                                          16.796875
1.562500
                                                                                                                                                                         9.765625
13.281250
                                                                                                                                                                                                                                         5.859375
3.125000
   [10]
                                                                                                                                                                        13. 281250
23.461538
5.859375
90. 234375
10. 156250
21. 538460
95. 384610
3. 118992
13. 076925
12. 500000
19. 921875
5. 499750
8. 593750
13. 671875
7. 049852
3. 918648
5. 468750
                                                                             7.812500
8.984375
13.461542
5.468750
10.584080
12.921625
                                                                                                           48. 828125
13. 461536
4. 687500
10. 156250
                                                                                                                                          74.230770
5.859375
   [28]
[37]
                                                                                                                                                                                                                                         3.131199
7.031250
                                                                                                                                         5.859375
13.461542
7.692307
89.062500
2.343750
86.718750
8.461541
2.356148
6.274801
[46]
[55]
[64]
[73]
[82]
[91]
[100]
[109]
                  45.703125
94.696970
                                                4.365075
19.140625
                                                                                                                                                                                                                                      15.234375
28.906250
                     9.765625
3.515625
                                                   5.078125
3.906250
                                                                                                             6.177884
11.718750
                                                                                                                                                                                                                                        3.125000
8.984375
                                                                             12.921625
4.687500
6.947112
9.999996
7.692313
13.671875
4.687500
5.060095
6.640625
3.906250
                 7.692307
14.230764
6.640625
4.687500
12.349760
16.015625
                                                  4.687500
6.653023
9.765625
6.610579
                                                                                                                                                                                                       12.109375
5.006009
                                                                                                             9.375000
13.076925
                                                                                                                                                                                                                                         9.375000
7.794470
                                                                                                                                                                                                                                                                       8.204
                                                                                                               9.375000
5.468750
                                                                                                                                                                                                          8.234125
7.031250
                                                                                                                                                                                                                                      3.894234
12.109375
                                                                                                                                                                                                                                                                    78.846
7.812
                                                                                                                                                                                                       11.328125
                                                                                                               9.802830
8.203125
 [118]
                                                                                                                                              7.031250
                                                    3.515625
                                                                                                                                                                                                                                      25.390625
                                                                                                                                                                                                                                                                        5.078
[118]
[127]
[136]
[145]
[154]
[163]
                                                                                                                                                                                                                                     8.984375
7.031250
5.859375
10.156250
                                                    8.984375
                                                                                                                                           12.692303
                                                89.843750
13.281250
6.250000
6.640625
                  89. 843750
5. 859375
9. 765625
                                                                                                                                          8. 203125
13. 461536
8. 984375
2. 343750
                                                                                                                                                                                                       8.203125
15.234375
14.453125
8.593750
                                                                                                               5.468750
4.687500
8.593750
                                                                                                                                                                                                                                                                    6.640
12.890
                                                                                                                                                                                                                                                                    49.230
                                                                                                            8.984373
13.671875 2.343750
12.890625 5.060095
10.156250 9.615385
14.453125 78.076920
                                                                                                                                                                         5.468750
10.546875
10.546875
                  11.328125
                                                                                  6.923079
                                                                                                                                                                                                                                                                     76.95
[172]
[181]
                  44.615383
12.890625
5.859375
7.421875
                                                                                  6.250000
7.692307
9.375000
                                                                                                                                                                                                                                     10.937500
5.078125
                                                10.907454
                                                                                                                                                                                                           3.906250
                                                                                                                                                                                                                                                                       9.375
                                                                                                                                                                                                                                                                       8. 984
7. 421
                                                10.937500
                                                                                                                                                                                                       13.671875 100.000000
                                                                                                                                                                         12.307697
 [190<sup>-</sup>
                                                    8.203125
```

```
> amostraCPU4 <- sample(Teste23$CPU.Total, 200)
> amostraCPU4 | SamostraCPU4 | Sa
```

RAM:

1-

```
> amostraRam <- sample(Teste23$Ram, 200)
> amostraRam
[1] 64.28256 65.22461 64.88518 64.20746 65.69151 64.96563 63.86141 65.28665 64.44881 64.19612 64.23151
[12] 64.30750 64.16574 64.30683 64.44238 64.36203 64.59042 64.28697 64.13428 64.18777 66.81433 66.87859
[23] 63.89847 64.50340 64.74818 64.10242 64.34097 67.34146 65.29239 64.72108 63.81085 64.32050 67.67136
[34] 64.00548 64.14037 66.77089 66.79185 64.39025 63.34169 64.26131 65.34834 64.51944 64.11533 64.25056
[45] 64.57300 63.35004 64.16186 65.38968 63.82336 64.50290 66.95000 64.14512 64.56814 66.32436 64.21674
[56] 63.34086 64.37547 64.68948 63.83529 65.00274 63.77271 66.38550 64.80212 65.55937 63.87248 63.83677
[67] 64.00851 66.41414 65.97443 64.17300 65.11426 65.07254 65.83238 64.25119 64.37704 64.19764 64.24069
[78] 63.83593 65.55736 66.90538 64.94551 63.87230 64.84046 64.19803 64.42751 65.21719 64.27117 64.23058
[89] 65.39071 65.81638 64.13585 64.727893 65.69769 64.87747 63.86931 66.27699 64.32914 65.50227 65.21445
[100] 64.51762 64.10909 63.98289 64.05328 63.77335 64.18522 66.32568 65.69209 64.48121 65.90707 65.04588
[111] 65.04407 66.30248 63.99855 64.90402 64.79736 64.19528 63.38154 64.28616 65.30933 64.31373
[122] 64.45342 66.25545 64.30804 66.15605 64.66179 66.47481 64.96637 65.13223 66.37756 65.30933 64.31373
[133] 65.64340 63.91132 64.17938 64.77238 64.19588 65.65102 64.58949 64.58566 65.32155 64.42584 67.41975
[144] 64.14497 64.95645 64.89961 66.16002 64.89961 63.45744 66.89331 65.72469 65.71545 64.01646 63.80648
[155] 63.76348 65.08594 64.42722 64.71529 64.20702 64.72413 64.20398 64.17570 65.52850 65.10802 63.34954
[166] 66.27955 65.22200 66.35101 66.20518 63.42735 64.23735 64.28774 65.88064 65.45236 65.45236 65.9936 65.65204 63.81865
[188] 65.24895 64.17025 63.90882 64.44385 66.12041 64.65860 65.16727 63.74203 64.76276 64.43649 64.21992
[199] 64.95287 65.47333
```

```
> amostraRam2 <- sample(Teste23$Ram, 200)
> amostraRam2
[1] 64.56631 66.16086 65.37717 64.90825 63.86141 64.11935 66.78021 65.07254 64.58733 64.87433 64.1862
[12] 65.26637 63.82518 65.97173 63.33791 63.75602 65.36867 64.31157 66.25162 64.26921 66.77462 65.3193
[23] 66.42233 64.22008 65.85874 65.31933 66.94067 64.59600 66.34679 63.32809 65.04485 63.73722 64.1833
[34] 64.20746 65.00343 64.23952 64.59911 63.32908 66.38557 65.85886 68.34206 64.19144 64.43016 66.87835
[45] 64.89004 65.40568 64.53226 64.25723 64.41479 66.95000 64.15297 64.39565 65.08844 64.51503 63.4196
[56] 64.43030 64.18365 64.63588 67.10438 64.99960 64.48038 64.12939 64.22734 64.90462 66.76662 65.7072
[67] 66.90976 64.28987 64.34495 66.58535 86.61537 66.53396 64.18606 64.58542 65.37510 65.14877 64.1158
[78] 66.11433 68.67245 65.71133 64.66297 64.20367 64.58267 66.08305 65.24385 64.63048 64.12033 64.2315
[89] 64.32914 66.79489 64.76021 64.66679 64.71721 64.32055 64.41975 65.37190 64.26607 66.76505 63.8144
[100] 66.48080 66.28632 64.33699 64.68752 66.45714 64.12985 66.15276 63.33683 66.93990 64.59916 65.8853
[111] 66.43338 66.67297 63.77271 65.27286 65.73666 65.29788 65.01781 64.43880 64.99783 63.86204 66.7312
[122] 64.31628 63.93278 66.07040 65.95909 64.81131 63.78415 64.0719 63.26296 63.27380 64.63632 63.7438
[133] 65.42615 64.17938 65.00244 65.06336 64.53240 64.09476 64.43816 66.16748 65.72440 65.87238 66.1911
[144] 64.18507 67.41975 64.13683 63.378277 64.14217 65.58813 68.10528 65.80666 66.23749 64.11464 63.5004
[155] 65.05899 64.15916 63.34911 64.151076 64.20398 64.35609 65.06012 65.80622 64.3862 66.23749 64.11566 66.23749 64.15916 63.34911 64.10176 64.02038 64.35609 65.06012 65.80622 64.36825 64.3860 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.23640 66.2364
```

```
> amostraRam3 <- sample(Teste235Ram, 200)
> amostraRam3
[1] 64, 91595 63, 90632 64.11641 66.04747 64.92072 64.58110 66.14491 65.29352 65.01172 64.53117 64.48121
[12] 66.38189 66.23468 65.30550 66.85213 63.33261 66.05483 64.60294 64.79864 64.13717 66.46048 63.89847
[23] 65.81750 66.44359 64.20398 64.66042 64.99596 63.32908 63.42371 65.86758 68.04181 66.29619 64.12985
[34] 64.18915 66.26467 64.07925 64.27289 65.68031 64.10242 64.55999 66.14623 64.36551 64.66594 63.34169
[45] 65.31271 63.39809 64.20893 64.24109 64.16613 64.43153 64.22066 64.69826 66.88040 65.17223 64.91228
[56] 65.71497 63.27380 65.28665 64.34254 66.00128 64.92401 64.72511 63.75602 65.37510 64.5664 64.29606
[67] 64.93475 66.10716 64.08602 64.94884 65.31393 63.77040 64.23151 64.14944 63.43034 63.98584 63.75754
[78] 65.38124 64.25350 66.14687 65.06493 64.98757 64.22278 65.63751 64.08504 64.80212 65.52138 63.46273
[89] 64.37886 65.30785 64.30263 65.17307 64.19460 65.03268 65.42683 64.32708 64.24760 64.87075 64.31849
[100] 63.33742 67.60156 64.21271 64.31628 64.24196 64.36571 64.54521 64.99449 67.41533 64.4661 65.79247
[111] 65.13168 63.87014 64.09618 64.30048 65.39032 66.14918 64.35457 63.34468 64.15936 66.94067 66.52980
[122] 64.13452 66.69308 65.80548 64.20367 66.24976 65.65102 64.18507 64.30847 63.99987 65.31468 65.46699
[123] 66.08537 64.87747 63.35052 64.36110 66.11433 64.49010 64.17172 65.68488 65.67266 64.87266 64.980216 65.9836 61.48716 64.87717 64.99014 64.7717 64.29660 64.12455 64.99016
[155] 63.91937 64.37111 65.96138 63.74385 64.44493 64.99334 64.17172 65.68488 65.67266 64.12455 64.99016
[155] 64.00548 65.31600 63.79770 63.26296 65.75456 64.23421 64.02275 65.01285 64.26921 65.64536 64.37013 [199] 65.48181 65.22210
```

Memória Usada:

```
> amostraUsada <- sample(Teste233Memoria.Usada, 200)
> amostraUsada
[1] 5.113102 4.985344 4.934666 5.142826 5.045609 5.102810 5.116203 4.989700 5.002426 5.018185 5.145836
[12] 4.981438 4.979645 5.009907 4.983891 4.928696 5.114964 5.076504 5.086758 5.043137 5.149536 5.020332
[23] 4.973408 4.735023 5.061619 5.136753 5.272785 5.061749 5.079174 4.982250 5.153870 4.920258 5.042725
[34] 5.096558 4.928772 5.157417 5.032246 4.960072 5.327175 5.253696 5.130447 5.006947 5.015175 4.996666
[45] 5.116421 5.183201 5.023216 4.995541 4.963642 4.922260 5.140491 5.027496 5.162052 5.026276 4.988045
[56] 5.215057 5.045044 5.064514 4.988922 4.959099 5.160942 4.998402 5.067722 5.025666 5.141102 4.988884
[67] 5.104778 5.043747 5.060646 5.181244 5.044559 5.012291 4.999218 5.033947 4.963875 5.114960 5.030373
[78] 5.134167 5.057030 5.161228 4.996555 5.070862 4.958462 4.967945 5.096439 4.954922 4.935719 4.991985
[89] 4.922638 4.974461 5.073666 5.030155 5.018482 5.179550 5.046112 4.928913 5.028526 5.126228 5.051987
[100] 5.006271 4.990837 5.026070 5.199444 4.988640 4.9795616 5.210327 5.026398 5.138115 4.983582 5.017803
[111] 5.006306 5.027382 5.196537 4.972416 5.059875 5.316055 5.043713 5.041470 5.007378 5.102348 5.142246
[122] 5.011196 5.014980 5.053783 5.062248 4.983479 5.136655 5.102644 5.14170 5.007378 5.102348 5.142246
[123] 5.01109 5.004980 5.053783 5.062248 4.983479 5.136655 5.106840 5.119564 4.991352 5.252560 5.201607
[144] 5.136410 4.934978 4.992126 5.199589 5.015163 5.029839 5.021824 5.049862 5.008678 5.007942 5.078785
[155] 5.130013 5.223896 5.042267 4.963089 4.992630 5.029839 5.016824 5.049869 5.008678 4.990366 5.002484 4.990365 5.002484 5.007942 5.078785
[166] 4.972103 4.986183 4.989075 5.062488 5.047539 5.139648 4.978039 4.982788 4.991711 5.064899 5.149010
[177] 5.163471 5.156181 5.001781 5.024387 5.029537 4.993042 5.071632 5.157448 5.089703 4.980186 5.005444
[188] 5.150856 5.201908 4.985413 5.001787 5.024120 5.147446 5.183094 5.007030 4.917362 5.136459 5.002064
```

```
> amostraUsada2 <- sample(Teste23$Memoria.Usada, 200)
> amostraUsada2
[1] 5.112343 5.137970 5.020359 4.994015 4.979729 5.152222 5.079533 4.972416 5.142796 4.987244 5.080418
[12] 5.019444 4.986904 5.147385 4.998711 5.138023 5.036137 5.165142 5.141907 4.967945 4.959705 5.009460
[23] 5.190899 5.003632 5.021339 5.056099 5.056625 5.127167 5.051086 5.056103 5.086399 4.990395 5.045994
[34] 4.985344 5.078575 5.000942 5.1585873 5.000584 4.956505 5.003101 5.028576 4.961113 5.015461 5.102020
[45] 4.990599 4.977978 5.127243 4.972424 5.020775 5.092899 5.153870 4.982277 4.963989 5.028168 5.272785
[56] 5.061512 5.162041 5.047852 4.994228 5.087841 5.035088 5.042892 4.956528 5.019459 5.109760 4.954838
[67] 5.007591 5.181290 5.147686 5.039993 4.983803 5.226738 4.988338 4.994873 5.131332 5.015079 5.021507
[78] 5.095245 5.055256 4.916519 5.105255 4.993042 4.966839 5.008011 5.043747 5.114330 4.977940 5.057030
[30] 5.154541 5.026646 5.197651 5.007518 4.994586 5.019471 5.007336 5.043747 5.114330 4.977940 5.057030
[100] 5.154541 5.026646 5.197651 5.005885 4.994560 5.019814 4.986954 4.993088 5.006271 5.019314 5.114544
[111] 4.999092 5.061665 5.007374 5.114422 4.922260 4.993809 5.054054 5.003220 5.102810 5.02897 5.071636
[122] 5.056374 5.001625 5.033077 4.995350 5.090366 4.922607 4.956425 5.058681 5.162407 5.072456 5.112663
[133] 5.050426 5.007378 5.008263 5.164448 5.052280 5.260204 5.085606 5.034225 5.001701 5.196537 4.983398
[144] 5.000103 5.108303 4.988773 5.042381 5.078617 5.016171 5.004083 5.206225 5.003407 5.12663 5.03379 5.12663 5.132515 4.988278 4.995254 5.036685 5.001265 5.003307 4.995350 5.0014015 5.000148 5.006265 5.003707 5.112663
[137] 5.155136 4.988288 4.992504 5.009686 5.008293 5.014015 5.000148 5.066355 5.003207 5.02274 4.92882 5.081848 5.081482 5.316055 5.010181 5.006836 5.047209 5.004948 4.993298 5.080940
[188] 5.116112 4.993790 5.150757 4.989086 5.081261 5.211884 4.995312 5.036701 4.965908 5.010670 5.089703
[199] 4.990330 4.986710
```

```
> amostraUsada3 <- sample(Teste23$Memoria.Usada, 200)
> amostraUsada3
[1] 5.136410 5.142448 5.123363 5.048130 4.996555 5.017529 5.023087 5.139023 5.092899 4.991352 5.131924
[12] 5.102348 5.042030 5.132835 5.041592 4.870880 5.006271 5.096493 5.026497 4.985451 5.137970 5.021339
[23] 5.002193 4.994293 5.049084 4.993275 5.137032 5.139633 5.001797 5.038467 5.104877 5.033962 5.158566
[34] 4.993710 5.041115 5.080666 5.003941 4.932045 5.014015 5.0688970 5.095879 5.014248 5.138313 5.013744
[45] 5.064167 5.002884 5.209847 5.085281 5.102371 5.051201 5.165142 4.989040 5.084583 5.055000 5.042713
[56] 5.006664 4.960949 5.186882 5.054523 5.012291 5.190941 5.016037 5.005650 5.206085 5.017811 5.075329
[67] 4.937069 4.959721 4.960213 5.011196 5.045994 4.990643 5.006306 5.200897 4.990837 5.080418 5.094223
[78] 4.985779 4.987465 5.130009 5.027649 4.990404 4.991112 5.095928 5.018406 5.040863 5.024982 5.056187
[89] 5.142811 5.132515 4.996414 5.214573 5.166130 5.164677 5.097744 5.063908 5.060074 4.981163 5.028072
[100] 5.002411 5.010822 5.201900 5.094463 4.917316 5.071072 5.114960 5.046745 5.146370 5.066021 5.023849
[111] 4.984234 4.988651 5.056995 4.983757 5.019295 5.011963 5.111390 5.007000 5.076416 4.979927 5.134701
[122] 5.110134 5.121971 5.105309 4.992599 4.974907 4.991890 5.104835 5.072565 4.995758 5.154957 4.999898
[133] 4.947632 5.153507 5.166229 5.004208 4.982647 5.056644 5.009953 5.024063 5.201607 5.244961 5.199497
[144] 5.085083 5.122009 5.086220 4.988518 4.959286 4.987984 4.983562 5.018562 5.004128 5.071632 4.967533
[155] 5.114368 5.025322 5.149712 5.104774 4.958076 5.0660978 5.102555 5.005779 5.140823 5.071632 4.967533
[157] 4.960072 5.016701 4.983265 4.977142 5.025040 4.972424 5.018452 4.966518 4.983479 5.066646 5.007030
[168] 5.018913 5.005964
```

4-

```
> amostraUsada4 <- sample(Teste23$Memoria.Usada, 200)
> amostraUsada4

[1] 5.056179 5.074520 5.010189 5.044933 5.092587 4.923923 5.062878 5.203381 5.027229 4.998756 5.001453
[12] 5.1511729 5.027496 5.122078 5.030373 5.104774 4.992844 5.060646 5.006947 4.986397 5.114960 4.984661
[23] 5.119022 4.9900967 4.995350 5.020233 5.019615 5.011703 4.994560 4.977978 4.995407 4.926785 5.257648
[34] 5.021717 4.998550 5.010670 5.283241 5.083065 5.107861 4.989956 5.000504 4.989922 5.041592 5.008762
[45] 5.085281 5.069332 4.931286 5.000820 5.006336 5.199715 5.030151 5.050636 5.021770 5.196510 4.986168
[56] 5.141766 4.986481 4.994228 5.006905 4.985928 5.065941 4.991791 5.030151 5.050636 5.021770 5.196510 4.986168
[67] 5.131924 5.151535 4.988518 5.010746 4.962624 4.982788 4.947632 4.992962 4.988194 4.995758 5.004314
[78] 4.987068 5.111889 5.002499 5.146370 5.165016 5.064091 5.071884 5.147469 4.998360 5.082664 5.000942
[88] 5.089775 4.992523 5.011581 4.990131 5.158573 5.051075 5.214573 5.007591 5.023849 4.985741 5.006687
[100] 5.125420 5.287910 4.980312 5.244961 4.993710 5.084633 5.141907 4.988922 4.994731 4.996147 4.929012
[111] 5.010853 4.979549 5.080866 5.202335 4.981052 4.983887 5.140942 4.982803 5.014423 5.141682 4.986944
[122] 5.044983 5.133537 4.999592 5.046535 5.020775 5.052425 5.075439 5.336600 5.096493 5.01862 6.04384
[144] 5.051727 5.011234 4.999336 4.997893 5.027649 4.982445 4.984234 5.079174 4.988182 4.922573 5.05438
[144] 5.051727 5.011234 4.999336 4.997893 5.027649 4.982445 4.984234 5.079174 4.988182 4.922573 5.056438
[145] 1.19673 4.990643 4.965519 5.053783 5.150941 5.162132 5.099495 4.956505 5.02315 4.996086 4.995466 4.995466 4.993491 4.98964 5.123394 4.986237 5.002774 4.986505 5.002774 4.98666 5.00277 5.052285 5.075439 5.136600 5.096493 5.02567 5.023285 5.002676 5.13600 5.096493 5.002676 5.152248
[177] 5.103165 4.990643 4.965519 5.0553783 5.150945 5.162132 5.099495 4.956505 5.023356 5.02325 5.000276 5.15208 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676 5.002676
```

Disco:

```
> amostraDisco <- sample(Teste235Disco, 200)
> amostraDisco
[1] 51.21114 51.22185 51.22231 51.21114 51.22471 51.21153 51.21114 51.22276 51.21114 51.22180 51.22471
[12] 51.21214 51.22185 51.22249 51.2233 51.21214 51.22452 51.22453 51.21216 51.22433 51.2188 51.2230 51.21215
[23] 51.21241 51.21114 51.21107 51.22180 51.21215 51.22289 51.221114 51.22155 51.22240 51.21215
[24] 51.21244 51.21153 51.22200 51.22457 51.22180 51.22115 51.22289 51.22117 51.21214 51.21159 51.22289
[45] 51.22200 51.22453 51.22457 51.21156 51.22200 51.2156 51.22289
[45] 51.22240 51.22457 51.22151 51.21151 51.22457 51.22155 51.22289
[45] 51.22249 51.2153 51.22457 51.21156 51.22200 51.22155 51.22247 51.21217 51.22147 51.2114 51.21159
[56] 51.22185 51.21114 51.22451 51.21211 51.22457 51.22457 51.22457 51.22478 51.22478 51.22478 51.22478 51.2247 51.21211
[78] 51.22449 51.22278 51.22433 51.22243 51.222457 51.22457 51.222458 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22215 51.22230 51.2215 51.22230 51.2215 51.22230 51.2215 51.22230 51.22
```

```
> amostrabisco2 <- sample(Teste23$bisco, 200)
> amostrabisco2
[1] 51.22430 51.22231 51.21214 51.21217 51.22231 51.21998 51.21113 51.22139 51.22294 51.21228 51.22452
[12] 51.22457 51.21217 51.21113 51.21214 51.21216 51.22180 51.22453 51.22233 51.22214 51.21217 51.22180 51.21114
[23] 51.22457 51.21217 51.22459 51.21128 51.21214 51.22180 51.2113 51.22214 51.21217 51.22147 51.22477 51.22247 51.21215 51.22214 51.21217 51.22487 51.21219
[34] 51.21214 51.21159 51.22438 51.21114 51.2121 51.22447 51.22419 51.22115 51.22214 51.21215 51.22249
[45] 51.21214 51.21159 51.22186 51.22439 51.22218 51.21228 51.21129 51.22115 51.22214 51.21215 51.22489
[45] 51.21998 51.22341 51.21217 51.22139 51.22231 51.22285 51.22247 51.22230 51.21214 51.22446 51.2243
[67] 51.21998 51.21222 51.21818 51.22453 51.22315 51.22285 51.22245 51.22214 51.22198 51.22247 51.22247
[78] 51.21228 51.22226 51.21222 51.21211 51.22145 51.22145 51.22345 51.22244 51.22255 51.22245 51.22145 51.22247 51.22218
[100] 51.21214 51.21215 51.22245 51.21215 51.22245 51.22245 51.22245 51.22145 51.22245 51.22148 51.22255 51.22247 51.222180 51.21228
[111] 51.21211 51.22449 51.22180 51.21228 51.21818 51.22243 51.22144 51.22139 51.22148 51.22247
[123] 51.222245 51.21217 51.22200 51.22231 51.22235 51.22245 51.21144 51.22139 51.22180 51.22247
[123] 51.22247 51.22249 51.21114 51.21215 51.22240 51.22155 51.22245 51.21144 51.22139 51.22180 51.22247
[124] 51.22247 51.22249 51.21114 51.21215 51.22245 51.21218 51.22235 51.22446 51.22457
[125] 51.22247 51.22247 51.22200 51.22431 51.22255 51.22245 51.21114 51.22139 51.22180 51.22247
[126] 51.22247 51.22247 51.22180 51.21228 51.21285 51.22235 51.22245 51.21114 51.22139 51.22180 51.22247
[127] 51.22247 51.22249 51.21114 51.21215 51.22235 51.22235 51.22245 51.21114 51.22139 51.22286 51.22457
[129] 51.22247 51.22247 51.22200 51.22437 51.22230 51.22245 51.21115 51.22235 51.22245 51.21114 51.22139 51.22245 51.21215
[144] 51.22276 51.22439 51.22135 51.22235 51.22235 51.22245 51.21114 51.22139 51.22246 51.22459
[157] 51.21818 51.22247 51.22415
```

3-

```
> amostraDisco3 <- sample(Teste23$Disco, 200)
> amostraDisco3
[1] 51.22438 51.21156 51.22180 51.22276 51.22139 51.21241 51.22431 51.22431 51.21214 51.21228 51.21107
[12] 51.21107 51.22457 51.21217 51.21228 51.22433 51.22362 51.22451 51.21159 51.22186 51.21228 51.21211
[23] 51.21998 51.21203 51.21241 51.22430 51.22447 51.21214 51.21215 51.21216 51.22433 51.21217 51.21214
[34] 51.22430 51.22341 51.22451 51.22457 51.22437 51.22436 51.22431 51.22238 51.22128 51.221156 51.22438
[45] 51.22240 51.22341 51.22451 51.22457 51.22430 51.22446 51.22431 51.22228 51.22128 51.221156 51.22438
[45] 51.22240 51.22341 51.22451 51.22457 51.22430 51.22446 51.22431 51.22228 51.22128 51.22156 51.21248
[45] 51.22240 51.22247 51.22438 51.21228 51.21114 51.22341 51.21998 51.22223 51.22245 51.22248
[46] 51.22433 51.22471 51.22438 51.21228 51.2114 51.22345 51.21215 51.22438 51.21228 51.22145
[47] 51.22249 51.2114 51.2230 51.2114 51.22362 51.22230 51.2114 51.212515 51.22438 51.21228 51.22452
[48] 51.22249 51.22230 51.22147 51.22471 51.22475 51.22345 51.22145 51.22452 51.2215 51.22438 51.21215 51.22438 51.21228 51.22414
[400] 51.22289 51.22431 51.22433 51.22155 51.2113 51.22452 51.22145 51.22230 51.22114 51.2230 51.2217 51.22452
[42] 51.1217 51.22230 51.2217 51.22473 51.22155 51.2113 51.22249 51.22228 51.22145 51.22230 51.22117 51.22457
[42] 51.22276 51.22280 51.2213 51.22245 51.22145 51.22285 51.22145 51.22275 51.22275 51.2228 51.22145 51.22275 51.22246
[43] 51.22247 51.22230 51.2233 51.21215 51.2233 51.22245 51.22228 51.22285 51.22126 51.22275 51.22246
[44] 51.22245 51.22230 51.2233 51.2113 51.22245 51.22236 51.22245 51.22228 51.22155 51.22135 51.22247
[45] 51.22276 51.22230 51.2233 51.22115 51.22345 51.22235 51.22245 51.22235 51.22155 51.2233 51.22247
[46] 51.22276 51.22230 51.2233 51.22145 51.22230 51.22345 51.22236 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 51.2235 5
```

```
> amostraDisco4 <- sample(Teste23$Disco, 200)
> amostraDisco4

[1] 51.21228 51.21198 51.22453 51.22452 51.22430 51.21818 51.22231 51.22294 51.21159 51.21217 51.21159

[12] 51.22186 51.22433 51.22214 51.22294 51.21114 51.21156 51.21222 51.22433 51.21107 51.22453 51.21114

[23] 51.22231 51.21114 51.21107 51.22278 51.22230 51.21159 51.22289 51.22413 51.21107 51.22453 51.21114

[23] 51.22231 51.21114 51.22167 51.21216 51.21214 51.22230 51.21159 51.22289 51.22449 51.21215 51.22433 51.21198

[45] 51.21114 51.22457 51.21114 51.21211 51.21153 51.21217 51.21198 51.22249 51.22449 51.21215 51.22433 51.21198

[45] 51.21115 51.22230 51.21114 51.21115 51.21115 51.21115 51.22429 51.22449 51.21215 51.22431 51.21241

[56] 51.21153 51.22230 51.21241 51.22230 51.22245 51.21159 51.22214 51.21217 51.22141 51.22115 51.22433 51.21216

[67] 51.21203 51.22289 51.22214 51.22230 51.22245 51.21159 51.22214 51.22214 51.22115 51.22433 51.21285

[78] 51.21203 51.22289 51.22214 51.22289 51.21153 51.22429 51.21203 51.22214 51.22141 51.22198

[100] 51.21215 51.22214 51.2230 51.21228 51.21228 51.22214 51.22203 51.22214 51.22433 51.21216

[101] 51.21297 51.2214 51.22430 51.22128 51.21228 51.22214 51.22230 51.22214 51.22230 51.22214 51.2233 51.22230 51.22128 51.22216

[102] 51.21217 51.2216 51.2243 51.22230 51.22128 51.22214 51.22230 51.22135 51.22230 51.22155 51.22230 51.22156

[122] 51.21217 51.22180 51.22131 51.221818 51.22231 51.22200 51.21198 51.22155 51.22230 51.22155 51.22238 51.22157

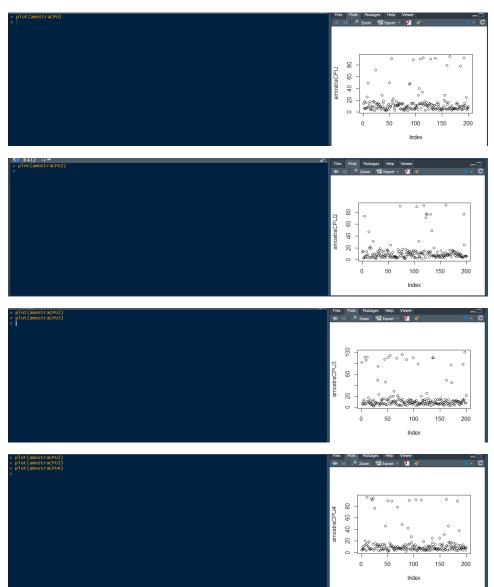
[144] 51.21214 51.22288 51.22294 51.21153 51.22243 51.22200 51.21198 51.21216 51.22155 51.22238 51.22157

[157] 51.22446 51.22278 51.22234 51.22230 51.22145 51.22139 51.22145 51.22138 51.22125 51.22131 51.22125 51.22131 51.22125 51.22131 51.22125 51.22238 51.22127

[157] 51.22246 51.22278 51.22239 51.22135 51.22230 51.22139 51.22245 51.22128 51.22238 51.22127

[158] 51.22246 51.22278 51.22239 51.22139 51.22230 51.22139 51.22230 51.22238 51.22231 51.22230 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.22238 51.2223
```

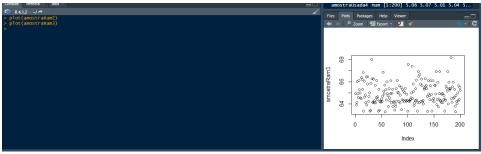
Vendo a variação de dados da cpu:



Variação de ram:





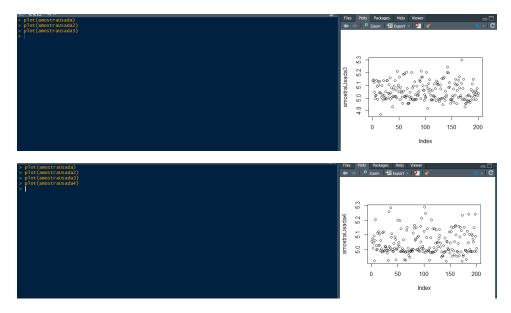




Variação de Memória Usada:







Variação de Disco:





Pegando dados gerais do computador:

```
data.frame(amostraCPU, amostraRam, amostraUsada, amostraDisco)
    amostraCPU amostraRam amostraUsada amostraDisco
                               5.113102
     13.281250
                  64.28256
                                             51.21114
                  65.22461
      8.076924
                               4.985344
                                             51.22185
                               4.934666
3
      7.849705
                  64.88518
                                             51.22231
8.593750
                  64.20746
                               5.142826
                                             51.21114
     10.000002
                  65.69151
                                5.045609
                                             51.22471
      7.031250
                  64.96563
                                             51.21153
                                5.102810
     12.890625
                  63.86141
                                5.116203
                                             51.21114
      7.031250
                  65.28665
                                4.989700
                                             51.22276
      9.765625
                  64.44881
                                5.002426
                                             51.21114
      6.250000
                  64.19612
                                5.018185
                                             51.22180
     10.156250
                  64.23151
                                             51.22471
                                5.145836
                  64.30750
                                             51.21222
      3.125000
                                4.981438
      8.984375
                  64.16574
                               4.979645
                                             51.22429
     10.156250
                  64.39683
                                5.009907
                                             51.22139
      5.859375
                  64.44238
                               4.983891
                                             51.21241
      1.562500
                                4.928696
                                             51.22452
                  64.36203
                  64.59042
     16.923082
                                5.114964
                                             51.22453
       5.468750
                  64.28697
                                5.076504
                                             51.21216
      3.906250
                  64.13428
                                5.086758
                                             51.22433
     18.076920
                  64.18777
                                5.043137
                                             51.21818
     14.843750
                  66.81433
                                5.149536
                                             51.22230
      4.687500
                                5.020332
                  66.87859
                                             51.21215
     13.281250
                  63.89847
                               4.973408
                                             51.21241
                  64.50340
                                             51.21114
     10.546875
                               4.735023
      7.812500
                  64.74818
                               5.061619
                                             51.21107
     21.093750
                  64.10242
                                5.136753
                                             51.22180
      7.812500
                                5.272785
                                             51.21211
                  64.34097
                                5.061749
     10.769224
                  67.34146
                                             51.21818
     33.203125
                  65.29239
                                5.079174
                                             51.22362
      4.687500
                  64.72108
                                4.982250
                                             51.21114
      6.250000
                  63.81085
                                5.153870
                                             51.22155
       5.859375
                  64.32050
                                4.920258
                                             51.22294
33
                                5.042725
      6.640625
                  67.67136
                                             51.21159
                  64.00548
     10.937500
                                5.096558
                                             51.21214
```

3-Fazendo variações da cpu, ram, memória usada e disco:

CPU:

```
> dadosCPU1 <- c(amostraCPU)
> variacaoCPU1 <- dadosCPU1 - mean(dadosCPU1)
> variacaoCPU1 <- variacaoCPU1 ^ 2
> variancaCPU1 <- mean(variacaoCPU1)
> var(dadosCPU1)
[1] 370.9798
> variancaCPU1
[1] 369.1249
> desvioCPU1 <- sqrt(variancaCPU1)
> sd(dadosCPU1)
[1] 19.26084
> desvioCPU1
[1] 19.21262
```

```
> dadosCPU2 <- c(amostraCPU2)
> variacaoCPU2 <- dadosCPU2 - mean(dadosCPU2)
> variacaoCPU2 <- variacaoCPU2 ^ 2
> variancaCPU2 <- mean(variacaoCPU2)
> var(dadosCPU2)
[1] 292.6461
> variancaCPU2
[1] 291.1829
> desvioCPU2 <- sqrt(variancaCPU2)
> sd(dadosCPU2)
[1] 17.1069
> desvioCPU2
[1] 17.06408
```

```
> dadosCPU3 <- c(amostraCPU3)
> variacaoCPU3 <- dadosCPU3 - mean(dadosCPU3)
> variacaoCPU3 <- variacaoCPU3 ^ 2
> variancaCPU3 <- mean(variacaoCPU3)
> var(dadosCPU3)
[1] 543.2497
> desvioCPU3 <- sqrt(variancaCPU3)
> sd(dadosCPU3)
[1] 23.30772
> desvioCPU3
[1] 23.24938
```

```
> dadosCPU4 <- c(amostraCPU4)
> variacaoCPU4 <- dadosCPU4 - mean(dadosCPU4)
> variacaoCPU4 <- variacaoCPU4 ^ 2
> variancaCPU4 <- mean(variacaoCPU4)
> var(dadosCPU4)
[1] 438.4416
> desvioCPU4 <- sqrt(variancaCPU4)
> sd(dadosCPU4)
[1] 20.939
> desvioCPU4
[1] 20.88658
```

Ram:

```
> dadosRam <- c(amostraRam)
> variacaoRam <- dadosRam - mean(dadosRam)
> variacaoRam <- variacaoRam ^ 2
> variancaRam <- mean(variacaoRam)
> var(dadosRam)
[1] 0.8811865
> variancaRam
[1] 0.8767806
> desvioRam <- sqrt(variancaRam)
> sd(dadosRam)
[1] 0.9387154
> desvioRam
[1] 0.9363656
```

```
> dadosRam2 <- c(amostraRam2)
> variacaoRam2 <- dadosRam2 - mean(dadosRam2)
> variacaoRam2 <- variacaoRam2 ^ 2
> variancaRam 2 <- mean(variacaoRam2)
Error: unexpected numeric constant in "variancaRam 2"
> variancaRam2 <- mean(variacaoRam2)
> var(dadosRam2)
[1] 1.448596
> variancaRam2
[1] 1.441353
> desvioRam <- sqrt(variancaRam2)
> sd(dadosRam2)
[1] 1.203576
> desvioRam2 <- sqrt(variancaRam2)
> desvioRam2
[1] 1.200564
```

```
> dadosRam3 <- c(amostraRam3)
> variacaoRam3 <- dadosRam3 - mean(dadosRam3)
> variacaoRam3 <- variacaoRam3 ^ 2
> variancaRam3 <- mean(variacaoRam3)
> var(dadosRam3)
[1] 0.9497735
> variancaRam3
[1] 0.9450246
> desvioRam3 <- sqrt(variancaRam3)
> sd(dadosRam3)
[1] 0.9745632
> desvioRam3
[1] 0.9721238
```

```
> dadosRam4 <- c(amostraRam4)
> variacaoRam4 <- dadosRam4 - mean(dadosRam4)
> variacaoRam4 <- variacaoRam4 ^ 2
> variancaRam4 <- mean(variacaoRam4)
> var(dadosRam4)
[1] 1.001872
> variancaRam4
[1] 0.9968628
> desvioRam4 <- sqrt(variancaRam4)
> sd(dadosRam4)
[1] 1.000936
> desvioRam4
[1] 0.9984302
```

Memória Usada:

```
> dadosUsada <- (amostraUsada)
> variacaoUsada <- dadosUsada - mean(dadosUsada)
> variacaoUsada <- variacaoUsada ^ 2
> variancaUsada <- mean(variacaoUsada)
> var(dadosUsada)
[1] 0.007741583
> variancaUsada
[1] 0.007702875
> desvioUsada <- sqrt(variancaUsada)
> sd(dadosUsada)
[1] 0.08798627
> desvioUsada
[1] 0.08776602
```

```
> dadosUsada2 <- (amostraUsada2)
> variacaoUsada2 <- dadosUsada2 - mean(dadosUsada2)
> variacaoUsada2 <- variacaoUsada2 ^ 2
> variancaUsada2 <- mean(variacaoUsada2)
> var(dadosUsada2)
[1] 0.005799527
> variancaUsada2
[1] 0.005770529
> desvioUsada2 <- sqrt(variancaUsada2)
> sd(dadosUsada2)
[1] 0.07615462
> desvioUsada2
[1] 0.075964
```

```
> dadosUsada3 <- (amostraUsada3)</pre>
> variacaoUsada3 <- dadosUsada3 - mean(dadosUsada3)</p>
> variacaoUsada3 <- variacaoUsada3 ^ 2
> variancaUsada3 <- mean(variacaoUsada3)</pre>
> var(dadosUsada3)
[1] 0.005084797
> variancaUsada3
[1] 0.005059373
> desvioUsada3 <- sqrt(variancaUsada3)</pre>
> sd(dadosUsada3)
[1] 0.07130776
> desvioUsada3
[1] 0.07112927
> dadosUsada4 <- (amostraUsada4)</pre>
> variacaoUsada4 <- dadosUsada4 - mean(dadosUsada4)
> variacaoUsada4 <- variacaoUsada4 ^ 2
> variancaUsada4 <- mean(variacaoUsada4)</pre>
> var(dadosUsada4)
[1] 0.006008259
> variancaUsada4
[1] 0.005978217
> desvioUsada4 <- sqrt(variancaUsada4)</pre>
> sd(dadosUsada4)
[1] 0.07751296
> desviousada4
[1] 0.07731893
```

Disco:

```
> dadosDisco <- (amostraDisco)
> variacaoDisco <- dadosDisco - mean(dadosDisco)
> variacaoDisco <- variacaoDisco ^ 2
> variancaDisco <- mean(variacaoDisco)
> var(dadosDisco)
[1] 3.487251e-05
> variancaDisco
[1] 3.469815e-05
> desvioDisco <- sqrt(variancaDisco)
> sd(dadosDisco)
[1] 0.005905295
> desvioDisco
[1] 0.005890514
```

```
> dadosDisco2 <- c(amostraDisco2)</pre>
> variacaoDisco2 <- dadosDisco2 - mean(dadosDisco2)</pre>
> variacaoDisco2 <- variacaoDisco2 ^ 2
> variancaDisco2 <- mean(variacaoDisco2)</pre>
> var(dadosDisco2)
[1] 3.060781e-05
> variancaDisco2
[1] 3.045478e-05
> desvioDisco2 <- sqrt(variancaDisco2)</pre>
> sd(dadosDisco2)
[1] 0.005532433
> desvioDisco2
[1] 0.005518585
> dadosDisco3 <- c(amostraDisco3)</pre>
> variacaoDisco3 <- dadosDisco3 - mean(dadosDisco3)</pre>
> variacaoDisco3 <- variacaoDisco3 ^ 2</p>
> variancaDisco3 <- mean(variacaoDisco3)</p>
> var(dadosDisco3)
[1] 3.172678e-05
> variancaDisco3
[1] 3.156815e-05
> desvioDisco3 <- sqrt(variancaDisco3)</p>
> sd(dadosDisco3)
[1] 0.005632653
> desvioDisco3
[1] 0.005618554
> dadosDisco4 <- c(amostraDisco4)</pre>
> variacaoDisco4 <- dadosDisco4 - mean(dadosDisco4)</pre>
> variacaoDisco4 <- variacaoDisco4 ^ 4
> variancaDisco4 <- mean(variacaoDisco4)</pre>
```

```
> dadosDisco4 <- c(amostraDisco4)
> variacaoDisco4 <- dadosDisco4 - mean(dadosDisco4)
> variacaoDisco4 <- variacaoDisco4 ^ 4
> variancaDisco4 <- mean(variacaoDisco4)
> var(dadosDisco4)
[1] 3.157374e-05
> variancaDisco4
[1] 1.120904e-09
> desvioDisco4 <- sqrt(variancaDisco4)
> sd(dadosDisco4)
[1] 0.005619051
> desvioDisco4
[1] 3.34799e-05
```