

Echeverria-Javiera-Estadistica-Leiva.R

rstudio-user

2019-12-30

#1

```
n <- 1000  
rnorm(1000,0,1)
```

```
##      [1] -0.1760092760  0.0389355415 -0.4297404216  0.6893822632 -0.1389992827  
##      [6]  1.0156885245 -0.3428103547 -0.3728961000  1.4913402241 -1.1192866531  
##     [11] -0.6065914436 -0.7472812203 -0.0377591508  0.6478695057  1.4977572260  
##     [16] -1.3961604807  2.3712275007 -0.7169888317  1.6710802991  0.7973061865  
##     [21] -0.1265038700 -2.5466233698  1.1543422364  0.8829724918 -0.6465867655  
##     [26] -0.0759782286 -0.3506569763 -0.4316021769  0.8500323728 -1.4996499978  
##     [31] -0.5240773542 -0.4998133768  1.4314777270  1.2629195906  1.3296420087  
##     [36]  1.1478077516 -1.0756697009 -1.4295992686  0.4655811247 -0.0903426546  
##     [41] -0.2570120279 -0.4877349772 -0.1595614399  0.0354233418  1.2800009375  
##     [46]  1.2983039930 -0.2102716531 -1.0935707326  0.3860666614 -0.9087194754  
##     [51] -0.8986103518  0.4162784804 -0.4066090074  0.3404254920 -1.0241401591  
##     [56]  0.2161907511  0.7935455293  0.0226864199  0.6130825443  0.0668392521  
##     [61] -0.2806506380 -0.4565221663 -0.2752093444  0.6857486862  1.1416462998  
##     [66]  0.2396802005  0.2762654017 -0.3867142603 -1.3736296215  0.1827953328  
##     [71] -0.2695620561 -0.9920351740  0.4952174659  1.3580952216  0.0362456558  
##     [76]  0.8805963168  0.9588178866 -0.5574865916 -0.1429933404 -0.5377510846  
##     [81]  0.2219085792 -0.7979376064 -0.5173177993  0.2618868443 -0.7246055797  
##     [86] -1.3142910268 -0.0350525657  1.4536235148 -0.0741485750 -0.0099093500  
##     [91]  0.3318382996  0.1564885478  0.1167621909  1.7260428751  1.4486680486  
##     [96]  0.8994721269  1.0625409384  0.8149017933  0.6280001227 -1.0852015339  
##    [101]  0.1524146673  1.2709742891 -0.2366580759  1.1587437997 -0.6288523642  
##    [106]  2.1835179700  0.5370670995 -1.6407804652 -1.3051334978 -1.2492393004  
##    [111]  2.2446380866 -2.0389474447 -0.4066779382 -0.8889778349 -1.2579495984  
##    [116]  0.6773127607  0.2574763052  0.8637476722  0.6189090955  2.4289431177  
##    [121]  1.5164250583 -0.6707917958 -0.9996137928 -0.6895901265 -1.7305681703  
##    [126] -1.0781188361 -1.3540893972 -0.3596309530 -0.4405503269  0.2869996941  
##    [131] -1.2824634745  1.4150432752  0.4672509460  1.6083919907  0.5419122348  
##    [136] -1.6325766333  0.6491199624  1.0528834228 -1.0140206913  0.9676848628  
##    [141]  0.0238791907 -0.7366426678 -0.4849713442 -0.1174323759 -1.9317977799  
##    [146]  0.4899495052 -1.7078822005  1.8707015731  0.1136928241  1.6309707098  
##    [151]  0.3044358083  1.4661595589  0.1850976811  2.0879221349  0.6642828183  
##    [156]  0.0856905199 -0.7526019349 -0.0451507685  2.3783871400  0.1227675334  
##    [161] -0.5628240371 -1.1872746819  0.1124758996 -0.0610610321  0.8295548452  
##    [166] -0.5237299283  0.3753562493  1.3558629685 -0.2929226038  0.7147930000  
##    [171] -0.4383220570  0.4496638248 -0.3037625639 -1.2067355050  2.0999015051  
##    [176] -0.3241886183 -0.9242445706 -0.5296967901 -0.7799991906  0.7506118077  
##    [181]  0.5994681716  1.7484016207  0.8646837072  0.3009855916 -0.7289710093  
##    [186] -1.3204429407 -0.9129907247  0.0374821096  0.8677377582  0.5988429430
```

```

## [191] 0.7769511831 2.2673810278 -0.3648678978 -0.1944839336 -0.3558533059
## [196] 0.8837887925 -0.2123657850 -0.7060138954 0.5883247852 -1.0314396629
## [201] 0.8628943899 -0.9168398269 0.9243017413 -0.7456830133 -0.5287372524
## [206] 0.8427467009 0.7823783201 -0.9962860102 0.2696490955 0.2602696426
## [211] -1.3739092317 0.7455943293 0.1114185715 -0.5898789911 -0.0132811243
## [216] -0.1821678011 1.1419481579 1.9121973565 1.2345842755 -1.5685749670
## [221] 1.3108392548 0.8691883411 0.7242628030 -0.1378152409 1.3844915446
## [226] -0.3344166993 1.1050735443 0.7475829541 -0.5930166287 0.3097983164
## [231] -0.2927141031 -0.3604035075 1.7823263063 0.8951736722 -2.3606605249
## [236] -1.1396596804 0.5626082207 -0.2337257472 2.4522463124 0.6655201865
## [241] 0.9280097734 0.2062625773 -1.7810211266 -0.0270326496 0.6613113954
## [246] 0.3354083509 -1.4979307129 0.2150023339 -0.3531707424 -0.7702214820
## [251] -0.2821872688 -0.0833004657 -0.9580435459 1.4851639836 1.0840706337
## [256] 0.1378355284 -1.3818831056 0.1117317892 -1.2064520497 -0.4486581864
## [261] -1.7503986213 -1.2695198884 0.3166475373 2.7121442690 -0.4600782598
## [266] 1.6946289633 -0.8828069979 -1.2186055949 -0.8796314861 -0.0442134645
## [271] 1.1590207708 0.6521025036 -2.3147835721 0.7361070699 1.2982982727
## [276] 1.4358141869 0.1454914606 -0.7060740589 -1.8222099817 -0.9332673490
## [281] -0.6658058356 1.3372652672 1.3573684386 0.4779761173 0.0304691271
## [286] -0.8948094300 -1.6721814270 0.7702405006 -0.6251989390 -0.5995886047
## [291] -1.6381343099 0.7993263608 -1.7020360542 -0.1410867576 1.1717215624
## [296] -1.0393463745 0.2765599083 -0.6848658604 0.3246999694 -0.2744727972
## [301] 0.6801606228 0.4720280768 -0.3401130541 0.2485966951 -0.2446183503
## [306] 1.4066611299 -0.5695889692 -0.7110334897 1.1114001819 1.0483668068
## [311] 0.4799861158 -0.7878138798 1.0656626612 -0.8744010727 0.7462349993
## [316] 1.2342276325 1.5477683608 -0.0827177124 -1.5184343997 0.3662066791
## [321] 1.4247366534 -0.4417158235 -0.1891433224 -0.4162129364 0.8471545919
## [326] 0.5765000635 -0.6624131988 1.1217267696 -1.9417391665 -0.2857845690
## [331] -0.7290306586 1.4853445911 -1.3915256132 -0.6826289805 -1.1954629519
## [336] -0.7039702358 -0.6853846163 -0.2882045217 -0.5808974537 1.4972598701
## [341] 2.6575716955 0.6279342967 -1.7328995935 -0.1839531443 -0.7673974326
## [346] 1.2731823203 0.5555573480 -2.2227408494 -1.8766229529 0.2115804793
## [351] -0.8915057234 0.5604173803 -0.3645449009 -0.0666278014 2.2837259142
## [356] -0.1370634422 -0.2428147922 0.9328397348 0.8394513954 -0.3847503038
## [361] -0.8788583544 1.3523073636 2.0017006510 0.3289255784 0.7063691972
## [366] -0.1786065464 -1.2943990630 0.4064575240 -1.7367513635 -0.8295632039
## [371] -0.8549856461 1.3031976381 -1.6782361166 1.4462465670 0.8212182760
## [376] -0.2989166095 -0.9508880219 -0.6836265816 0.8964506140 0.0663275268
## [381] -1.2186612420 -0.8187470932 0.4355620873 1.0519674720 -1.9071430750
## [386] 0.0921373046 -1.7316490510 1.8140981123 -0.1366812151 -0.5559394013
## [391] 1.5864358429 -0.0795141811 0.9576874622 0.9318353649 0.0471075684
## [396] -1.1869066302 -0.0913167171 -0.0487138182 -1.0288294313 1.3970536990
## [401] -0.5543390300 0.5390803027 0.3276142683 1.3281829675 0.6576762335
## [406] 0.0861151485 0.6477551732 0.8081999434 -1.1174336405 -0.7466060130
## [411] -1.6504367059 -0.0366404250 2.3994008205 -1.3233067101 -0.1717156040
## [416] -1.6662979830 1.1320117025 -1.7662371093 0.5086561686 0.0183167754
## [421] -0.1300510657 0.1613035393 0.5483813087 1.7620758178 -1.2363422705
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## [431] 1.6956310643 -2.0805715542 -0.1626909496 1.1673324837 -0.8102892251
## [436] 1.2306563145 -0.7646886991 1.4861392084 1.9053102059 0.7021624877
## [441] 0.5178518952 1.5239670005 -1.0464743977 0.1448767224 -0.3453955270
## [446] -0.8254787199 2.2758714884 -0.1776535429 -0.9918088687 -2.0916268129
## [451] -0.4018203932 0.1719678090 0.5597598142 1.8190632986 -0.6908658617
## [456] -0.2583706515 0.1575643174 0.1741067836 -0.6588999687 0.0751766075

```

```

## [461] -1.2552866909 -1.4399945932 0.3596913135 -0.7090382908 0.6924780786
## [466] -0.2958336904 1.1038770143 -0.8164830045 0.2205752433 0.3137319500
## [471] 0.8272932661 0.7588424126 -0.4987026919 0.7143288932 1.8029679046
## [476] 0.5048827907 -1.0018451635 1.3349319666 1.4831083567 -1.1699327151
## [481] 0.3384152101 0.3876601644 -0.6816012184 0.5793462621 -0.7022948827
## [486] 1.6254234468 -0.7518676063 -0.2574012656 -0.0094941393 -0.2341760119
## [491] 0.5142077348 -0.3493206182 -0.0573097728 -0.1064071481 -1.7993023298
## [496] 0.0782365765 1.6190514010 -0.4613118310 0.3638936087 1.0620705759
## [501] -0.8647170083 -1.3171456327 0.3176306780 -1.3546320434 -1.3053216420
## [506] -1.3849118231 1.1353278284 -1.3801848060 -1.2268486575 -0.6563209118
## [511] -1.3808574527 1.0574273075 1.5409608469 1.3683199543 -2.2968886105
## [516] 0.1597064427 0.7505208184 2.4363032142 -0.3292330981 2.4182437190
## [521] 0.2855904276 -0.5665141694 -0.6762728011 -0.7958730808 0.6864984240
## [526] 0.0774200223 -0.1850722435 0.4297877923 0.3564018555 -0.3335190178
## [531] -0.5458071419 1.3385763398 -0.0327878014 -0.9237918698 0.4710963275
## [536] 1.0195871097 -0.7790398642 -1.5390118693 -0.9143171654 -0.9624774892
## [541] 0.7314219648 -0.9683302030 -0.0924186340 -0.5560100287 -0.1586791637
## [546] 1.5360392086 0.9083821910 1.1434326249 0.2345545519 0.6382215844
## [551] -0.9964533340 0.3808996160 -1.1725964568 -1.9069107017 1.2493209345
## [556] 0.4618611948 -0.7828946594 -0.9749164513 0.3701250184 -0.7323743182
## [561] -0.5168093351 0.8206087179 -0.6087083625 -0.3684096685 0.1454070794
## [566] 1.1719523771 -0.2147967707 0.8762767836 -1.0355177019 0.9270207808
## [571] -0.2242118931 1.2561793006 0.6318415524 -0.1568871919 -1.6318239901
## [576] -0.8021198795 -0.5234660430 1.4988188090 0.0297291168 -0.6950842731
## [581] -0.7320145096 -0.3878864012 -0.7557476873 1.6953335202 -0.9955026952
## [586] 0.8112773443 0.3774330576 0.5905597460 -0.4191475804 0.9652065294
## [591] -2.4522771824 0.8089932067 0.8112887870 0.7179126858 -0.2948406322
## [596] -0.5414710449 0.6900345155 -0.5148062549 1.0564694608 0.4996259175
## [601] -0.3262609785 -1.9570098641 -1.0897369252 -0.1713819816 -0.3817341631
## [606] -1.0114134778 -1.5559574665 1.7732580730 1.3201238616 0.9141365736
## [611] -0.9720776755 2.4421612373 -0.1065962352 1.1578226874 1.1881142550
## [616] 1.2785515117 -0.2151692834 0.2489967083 -0.1819320882 -1.8757476526
## [621] -2.0356964155 0.1642491881 -0.3239253470 0.3025044361 -0.9334047562
## [626] -0.9274273940 0.4675773017 -0.9277958955 0.4503235264 -2.0664387689
## [631] -1.5159502017 0.1393633965 0.6421920818 1.3792123277 0.2476499628
## [636] -0.2399196729 0.5325533685 0.0332135207 0.3716247989 0.5365936326
## [641] 0.9370077280 0.8387168213 -0.3267778712 0.3291662063 -0.4020219187
## [646] -1.0674751044 -1.1110550280 0.0245141683 -0.4241522962 1.7329062401
## [651] -0.4258009047 -0.0331541533 0.6358568441 -0.0838563088 1.5022075228
## [656] 0.4756418303 0.8041272927 -0.0079052706 -0.2087830011 -0.7115680762
## [661] -0.3774863245 -1.6202301915 -0.7985538723 -1.6441499078 -0.5788836938
## [666] 1.9240102988 0.4292665619 0.4463969390 0.9867138106 -0.2744138664
## [671] -0.7339741170 -1.2360654653 0.9373110753 -1.2524240108 -0.1217368718
## [676] -2.3622883137 0.5215805375 0.6256322398 0.5248631636 1.4527950826
## [681] -0.4423168678 0.1798006259 1.2679615773 1.1937858865 -0.1758847055
## [686] 0.4067311807 0.5057902700 0.6990592613 0.1900136449 -2.6715566822
## [691] 0.7060842952 0.1504549349 0.5808324612 0.5616038062 0.7193639962
## [696] -0.2296786728 -1.7814499592 -0.1631939122 1.3901770068 1.2962872824
## [701] 1.7046249687 0.8211838770 0.3876444211 0.7162680595 1.3361984332
## [706] -0.7957410941 -0.9318461611 0.9156880923 -0.6595751726 -0.4531036122
## [711] -1.2869025637 0.5781406722 -0.3297924291 -0.2065586526 -2.8956814728
## [716] 1.1763489211 1.8002002582 0.1166962548 -0.5717325828 0.9522459734
## [721] -0.5181290278 1.4328598840 -0.0004202713 -0.6229702628 0.3898042244
## [726] 0.5804133397 -1.2312951084 -1.6423173989 0.9959137836 0.8162335762

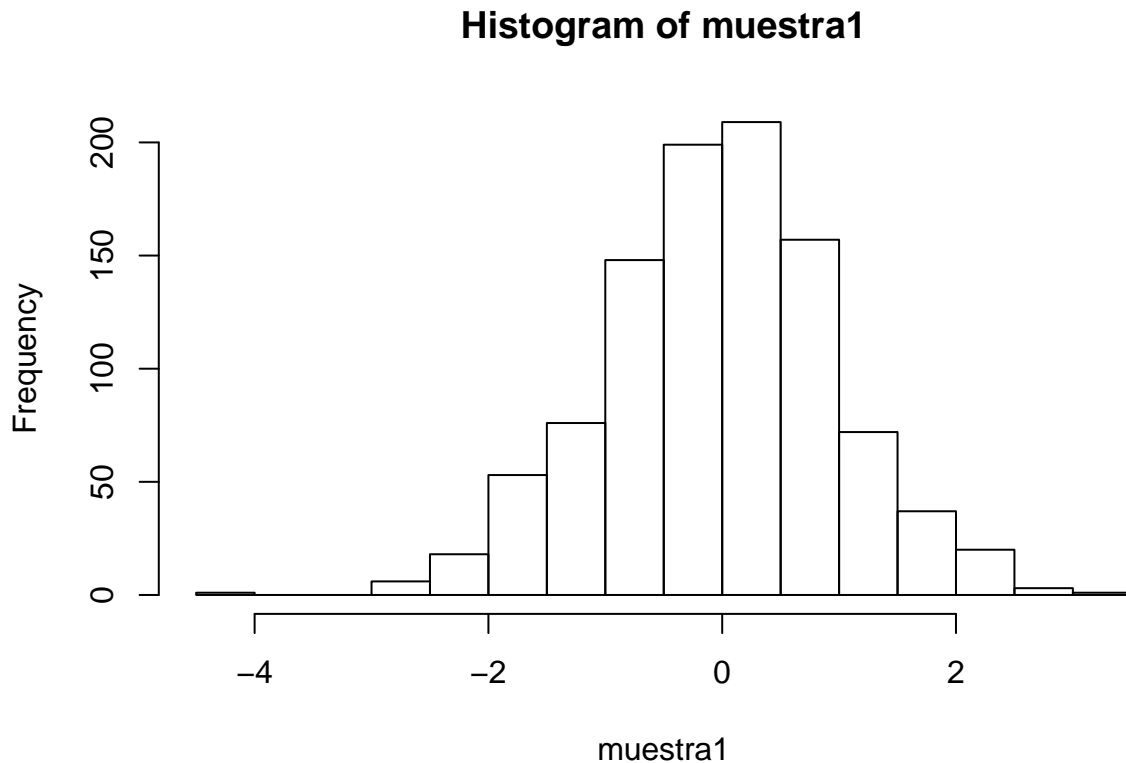
```

```

## [731] 0.3542717725 -1.1019595198 -0.0760554331 1.4422467982 -0.4465008400
## [736] 0.5202441115 1.3525416989 1.3495882031 0.5921343915 2.3786104551
## [741] 0.6138211449 0.3429860210 -0.2936529032 0.9333359780 -1.1530038340
## [746] -0.4551155019 -0.2674646881 -1.2717581072 -0.5966834979 -0.5995029711
## [751] -0.8279397395 -1.7216714973 0.4234966380 0.3642195033 0.9719116904
## [756] 0.0768006225 -0.6066611929 -1.7692809072 1.0614311451 1.2519842119
## [761] 0.8342366334 1.3344826983 0.1432827673 -0.0943077808 -0.1093615088
## [766] -1.1547678240 1.2887084491 1.3263303255 1.0915779734 -1.9983026326
## [771] 0.7268982806 -1.4162911008 -2.2853024638 -0.7401229435 -1.0341777109
## [776] 1.2347699832 -0.4544912102 -1.7958066239 -0.0340792186 0.9030994329
## [781] 1.4469995902 0.1244185255 0.9933468201 -0.1575879148 -0.1976191728
## [786] -1.9231878316 1.7567641420 1.4297320795 -0.2934389944 -1.6333853508
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## [806] 0.0222255803 -2.0719292082 0.0221401445 1.2513375186 -0.6893874092
## [811] -0.0956804296 0.7419715866 -2.1839880130 -2.7023691634 -0.2078198727
## [816] -0.2443809317 0.3890905474 -0.1487651132 0.6898790808 -0.8716723533
## [821] 1.1354152929 -0.2112494047 -1.6676632098 -0.8743632500 0.3190027168
## [826] -0.3530872767 1.6833037482 0.4333960441 -0.8254655354 1.0830352211
## [831] 0.7018763401 -2.4074618990 0.5101775531 1.6441269771 -0.3250230131
## [836] -0.8322098839 0.8604998462 -0.4633561746 0.4301675094 0.5844610632
## [841] 0.2843169191 1.0284004804 -1.1846732270 0.2221182296 -0.7479787174
## [846] -1.8140852434 0.1244301534 0.0988897201 0.5022748975 1.2935666244
## [851] -0.5272938991 -0.2460393484 -0.6396685846 0.5150366265 0.4678298298
## [856] -0.3478003094 0.9635623831 1.4750088893 0.9246452619 -0.6735128872
## [861] 0.3905561835 -0.6808566468 0.7722883547 -0.4396230291 1.1999049912
## [866] -1.1393881845 -0.5053139716 0.6095289729 0.3402645682 -0.1652201879
## [871] -0.1251370742 -1.1137651425 2.2044179248 0.2684667997 -0.3887515312
## [876] 1.3475386820 0.1432343756 -0.8687612453 -1.0767271513 0.6048701912
## [881] 0.4606427162 0.0165035616 -2.7290837889 1.9269103342 -0.6722647542
## [886] 0.0904928663 -0.0196839281 0.2593480444 -0.7898883084 -2.1876231661
## [891] -0.0297230579 -1.1529922025 0.1736529262 0.2010824413 -0.9795088654
## [896] -0.1171982287 -0.4304266433 -0.6752335418 -1.3181902319 -0.6793949817
## [901] 1.7988469934 -0.2592176625 -0.9681073966 -1.0377650167 0.0766315481
## [906] -1.1472293866 0.2951592682 -0.9394513693 1.3732644007 -2.1165632315
## [911] -0.5202568753 1.3119868716 -0.2514532007 1.1799852441 -0.9695535845
## [916] -0.3830790040 0.1577115869 0.0043933705 0.3040135273 -0.6735398141
## [921] -0.3565679690 -0.1926706171 -1.8603807328 -0.6096551626 1.4029552633
## [926] 0.2834377794 2.0400672828 0.1054440955 -0.5106358321 0.1153140340
## [931] -0.1922834790 0.1301098386 0.1349344312 -0.1965010566 0.6711663013
## [936] -1.2265476993 0.3982455481 1.2359489108 -0.0919477434 0.6868953413
## [941] 1.1539102414 -0.8016930901 -0.1701317042 -1.2942354096 -0.9258857573
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## [951] 0.2975195177 0.7004916438 0.9423564504 1.4989869934 0.1256496202
## [956] -1.2003662939 -1.0763875039 -2.7204464681 -0.1936270781 1.3515868915
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## [966] 0.4917672830 -0.7908849698 -0.1132842154 -0.1697349231 0.1667562927
## [971] -0.9351545164 0.9526927688 -0.1655093632 0.8105326613 1.0159013042
## [976] -0.2033282574 -0.7447143414 -0.8399985858 -0.3201834281 0.2831712687
## [981] 0.2504832352 -1.4819700321 -0.8940835479 1.1988068306 0.3140660430
## [986] 1.6224403357 1.0760158711 0.9621039552 -0.1719062357 0.3002648054
## [991] 0.8083601905 0.9327940545 0.6005474628 -1.0639629097 0.4779428693
## [996] 0.1504011669 -0.3590166308 -0.4487807133 0.3482642277 -1.0359276794

```

```
muestra1 <- rnorm(1000,0,1)
hist(muestra1)
```



```
rnorm(1000,5,3)
```

```
##      [1]  5.98075579  1.00549303  5.05334773  5.14785509  6.59880299  1.79991170
##      [7]  4.83546036 -2.39791451  5.70565146  2.38334664  6.21542966  0.62281428
##     [13]  6.74490296  6.79174668  7.98602106  9.73460824  3.02115186  3.13392380
##     [19]  4.65583391  4.41217682  4.69657907  9.02572511  0.52013883  7.36188164
##     [25]  5.69629971  8.74444906  8.87434019 -2.42188397  2.46620276  2.25669623
##     [31]  3.04584819 10.01256443  3.17072750  4.90036132  7.22024733  5.76709819
##     [37]  3.03670002  2.05730301  7.30438406  6.37756508  2.19062647  8.08249298
##     [43]  6.31849632  3.17139924  5.92340085  3.22386720  5.23595886  8.60765304
##     [49]  6.71644757  6.02444408  5.35336470  5.57218304 13.05550968  8.58552358
##     [55] 11.44438510  2.44387135  6.15839332  6.19263938  2.37279027  4.14505473
##     [61]  4.77972327  5.28709225  4.16136510  2.88454790  7.48156536  0.32830969
##     [67]  6.45392517  3.10256883  0.87128163  3.94700778  5.43162952  2.95386599
##     [73]  8.06284528  3.52736735  5.97960320  9.95244480  3.57813947  5.10775074
##     [79]  1.41595610  5.87493013  0.67747961  5.34909921  8.80929578  8.91133723
##     [85]  6.44288352  6.18668649  2.01668181  4.43064307  4.33037569  3.68618882
##     [91]  6.67022047  6.66639083 -5.11890959  5.47355246  1.33814258  8.19584614
##     [97]  2.50283803  5.08780472  9.59065249  4.12472060  4.15237977  4.72695680
##    [103]  4.48301085  5.85321251 15.26629021 -0.71675844  3.86839635  6.46559069
##    [109]  0.61500721  2.71853783  9.78788463 10.18882212  5.78935967  5.40961546
##    [115]  6.65971997  7.18642590  4.72203631  7.64012568  1.31037717  5.81237125
##    [121]  1.59299264 10.40177166  1.34735989 -1.01556613  2.63793524  7.12301141
##    [127]  2.91273093  2.21161816  5.83685930  7.60170156  5.86459559  7.82167332
##    [133]  8.86879403  4.19153948  3.15123219  3.54171480  6.69027425  3.38664778
##    [139]  5.66612182  1.78160818  5.57652227  3.89839169  4.16111256  6.11284128
##    [145]  9.57410886  6.14880837  7.70190452  5.42687643  4.48018495  1.32114174
```

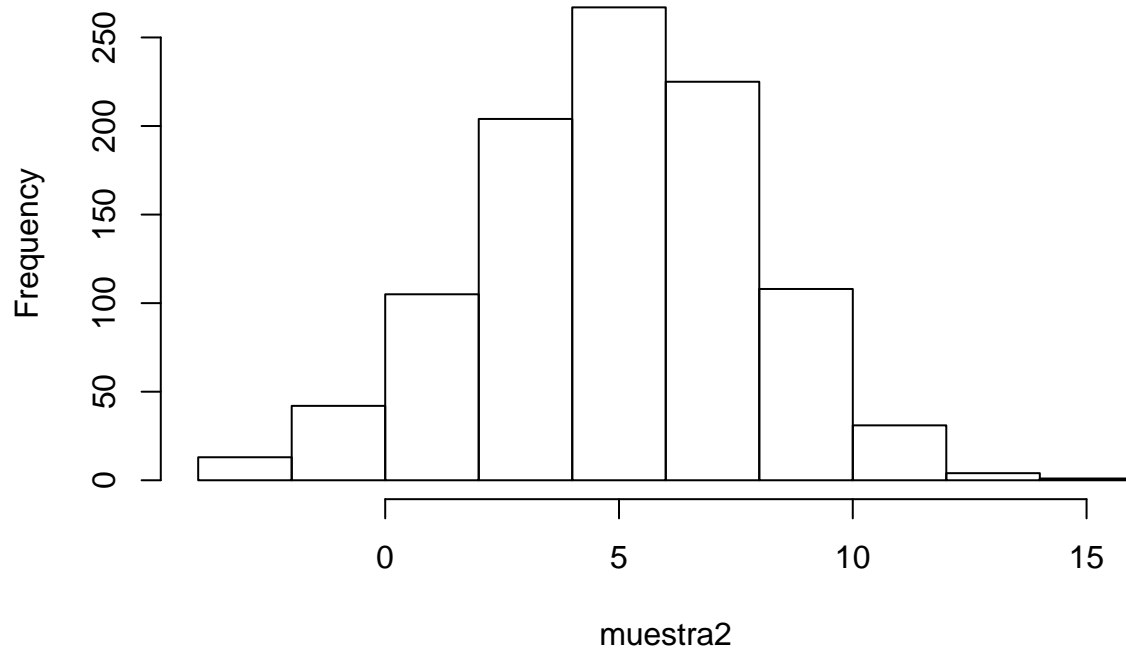
##	[151]	7.22050170	7.39541261	9.31150905	5.74468517	5.73314592	2.21659066
##	[157]	7.07725957	4.24249772	9.27336963	8.62340180	10.39942198	-1.22233943
##	[163]	0.56921296	5.68480703	10.58099409	-1.74094870	2.08093684	9.27975029
##	[169]	12.59747253	8.06605233	9.64978389	7.73015828	-2.35267975	4.93423064
##	[175]	6.03737608	7.83791803	7.19623969	2.87102282	5.17190017	2.65770500
##	[181]	4.48156167	5.85836671	9.54229405	6.64839381	1.38274470	2.64088140
##	[187]	0.95189404	4.44423797	3.29980480	7.00683063	5.26906819	5.67817397
##	[193]	7.41774737	4.78290125	11.89356068	6.57271322	5.57125949	10.60963474
##	[199]	2.77606306	5.15153008	2.85826494	7.69214416	5.99892886	5.57967001
##	[205]	6.39957990	6.60059230	3.30128659	5.36923162	7.18217153	4.07521853
##	[211]	8.42733817	1.78357493	-1.53275135	7.34279972	9.32117071	4.58652652
##	[217]	2.24320022	1.77340146	9.70929958	10.60094448	3.41500743	6.61086117
##	[223]	4.02500179	8.54316339	10.24749512	4.09214903	6.40111475	1.11085873
##	[229]	0.31644050	4.49255722	4.34801058	-0.86665821	1.58772285	5.38370213
##	[235]	5.29512027	4.30249264	8.97488295	1.80463050	3.83763724	6.76835235
##	[241]	5.74232180	8.54116872	6.63809474	3.65654496	7.96697803	6.48331939
##	[247]	2.08200858	1.70702415	2.43761449	5.66894053	0.22028852	-1.45017447
##	[253]	-0.31379374	3.24255663	4.51616582	4.34112763	2.70118047	3.71589847
##	[259]	6.51135811	7.00552924	6.83685326	5.69389294	4.65601876	8.22012916
##	[265]	7.40078975	9.11659969	12.87433918	4.93412070	9.73308529	4.97336924
##	[271]	4.44747314	-1.50284928	12.26615325	1.74457782	5.42169648	9.68007396
##	[277]	6.10077262	7.04574598	3.62057958	7.61256535	7.01463143	-0.14248427
##	[283]	12.20742246	6.16758300	1.86159622	5.63721628	0.86105778	6.10798322
##	[289]	7.47176603	3.78235570	8.72221140	-0.16253557	11.53317645	4.58901826
##	[295]	-0.30609975	5.89612741	5.08237487	4.90683459	6.12887429	-0.42902405
##	[301]	6.08459193	2.95002209	4.80325598	3.78735546	2.43368939	1.58843193
##	[307]	2.95723572	-0.18218340	2.60949272	5.82626634	6.10414206	4.72844221
##	[313]	6.54963620	7.64279930	3.94298065	8.55031042	2.52168902	6.30850393
##	[319]	1.42360114	3.46338843	8.92767245	6.46190128	6.55197733	8.80928423
##	[325]	11.95357602	11.60410867	7.52221310	6.91212581	5.05280541	4.21365840
##	[331]	4.80770214	13.07224557	1.71558656	9.40502374	4.97505531	1.84188219
##	[337]	3.64985237	7.72565333	1.51763471	11.68405896	3.84433832	6.63444589
##	[343]	5.24100833	6.37046169	6.92563791	11.04432197	5.16038479	2.92278786
##	[349]	4.35809108	5.02019197	2.61724503	4.46137651	8.70914972	4.01486748
##	[355]	3.28807826	6.02655036	1.11675088	6.57656505	3.94529835	4.95514393
##	[361]	3.88347262	7.89959030	3.22893870	6.56152224	4.85886413	5.83582459
##	[367]	4.43874258	7.58211516	5.29003869	6.45452950	4.06448444	6.64578982
##	[373]	5.61775345	6.94981377	0.78410524	0.79316764	7.08078222	2.64964688
##	[379]	8.61004705	6.89200578	3.22661427	6.58705428	7.62671980	5.63808285
##	[385]	1.39319234	9.47775929	6.65964751	5.41965201	1.91331079	0.05897752
##	[391]	2.18697629	11.65080519	1.73280536	6.37380348	4.86924258	6.47379378
##	[397]	0.84912973	4.08813972	2.02840239	4.24460512	0.07538571	1.97941028
##	[403]	7.01630530	8.99969553	0.83899575	1.57591883	8.76789976	5.91154322
##	[409]	8.23626162	3.77956162	5.18773631	4.27789660	8.31761645	4.29426112
##	[415]	9.02063128	4.92845655	3.41379723	2.71723828	-0.60960408	1.90576906
##	[421]	6.55449173	1.21368175	3.47306895	6.58194924	8.86163972	1.48694980
##	[427]	5.63222709	10.60890280	5.88830708	5.03485440	5.26763275	5.53156343
##	[433]	1.20015949	5.72753744	1.04830369	9.16400913	8.17139334	10.69319457
##	[439]	4.61049391	11.61024734	3.50771061	1.89404290	2.42262579	4.04207502
##	[445]	5.09040494	7.27855749	2.86350510	4.24852343	1.25555634	7.97657063
##	[451]	4.68307439	7.70419470	1.97303095	2.66781491	3.39972137	5.78302500
##	[457]	0.18390159	6.64375542	4.36950898	9.70910877	6.93411489	2.65383261
##	[463]	9.70514452	6.61909945	5.34369103	5.54439263	5.04215545	6.71548063
##	[469]	7.28871805	4.03684316	7.36492181	8.57848332	8.36634083	4.33676243

##	[475]	7.88316480	1.43004392	4.34865600	1.91139714	3.55661123	3.11062135
##	[481]	3.75382111	1.42733366	3.21173656	0.28008756	3.15914806	5.24873477
##	[487]	7.19884540	5.61266620	4.01248729	2.51238495	6.45264686	8.39668314
##	[493]	5.55016518	5.71342253	5.83407055	5.87232552	5.47584953	5.30358801
##	[499]	6.18639915	4.77533575	13.68447354	5.10166196	4.45482217	2.96312006
##	[505]	2.19217738	1.38944280	2.70187933	7.47422864	7.00834990	4.25641384
##	[511]	4.56302411	8.40074089	-0.92364408	1.45425438	4.40460653	4.75706100
##	[517]	6.67868663	2.75822759	7.48622760	3.05030543	8.99701154	1.06499883
##	[523]	7.63688161	5.62613705	2.03573082	-0.50658024	2.87135988	3.95039649
##	[529]	5.69337755	8.52417405	6.14428951	8.16873507	9.16351484	0.80521864
##	[535]	5.69972174	7.18361517	3.25019819	6.45709418	0.20029722	6.07381300
##	[541]	3.80609598	7.91414484	5.81262703	2.97543949	3.54614885	3.05873676
##	[547]	12.84668043	8.87426164	4.47468677	8.93569288	5.13426117	3.05764709
##	[553]	1.43334636	6.91430229	4.89978714	-0.19726345	3.37968892	3.87167701
##	[559]	5.51100612	-1.33996875	5.19652046	3.53161192	1.10160215	4.49459308
##	[565]	5.42708125	7.05172722	2.29016086	8.34133386	6.22307747	2.83499855
##	[571]	7.52810236	1.05873091	5.62726487	10.54330034	-0.15575181	4.21984822
##	[577]	5.38417352	3.60598128	4.65566264	7.30519406	8.22744165	1.86844717
##	[583]	5.90080301	-1.31607791	6.18002636	12.13898557	7.05494740	3.74777322
##	[589]	6.97265213	4.18579396	2.37238468	7.40172579	2.30072669	8.86955674
##	[595]	5.90104620	5.08890662	2.63315138	-2.29925059	3.69205002	9.27393306
##	[601]	4.53265010	6.95488125	7.31015826	6.01076093	6.61973046	2.80975246
##	[607]	-0.01059886	6.30231010	5.60864054	2.60683383	1.40248930	2.50017752
##	[613]	10.00043981	8.14893529	6.21218831	-1.20621172	-1.54133278	4.50828352
##	[619]	2.71943939	5.61392858	13.58763447	8.22168473	3.87729732	3.48841972
##	[625]	3.97316806	7.51019516	3.27362572	6.61468349	7.92686159	5.30492246
##	[631]	5.37243255	1.33265474	5.40090701	7.09044912	3.19493571	8.53479770
##	[637]	8.04652653	9.98476113	8.24213668	5.24824678	4.97631302	4.70749209
##	[643]	6.68769930	5.39309964	4.24832402	6.68545336	10.13334009	2.73801054
##	[649]	8.27955610	1.83456073	7.70495768	4.46870043	1.34747562	0.13371188
##	[655]	7.82072231	4.80217666	7.75442485	7.87140720	4.55462527	3.70424196
##	[661]	2.14688193	5.15637720	9.62555163	3.19695000	8.57682247	2.65028329
##	[667]	8.42913445	5.40444310	0.45342817	4.15072479	4.11108533	1.64762478
##	[673]	6.87254718	2.09962470	5.68233790	10.36025501	7.13945417	7.50157960
##	[679]	0.04391637	4.25085528	8.33384443	2.27974128	7.85110999	5.01199780
##	[685]	0.68975512	3.92523031	7.32496429	5.47862392	5.40540700	0.89843554
##	[691]	2.06492570	3.54502855	2.76798024	5.83908925	5.39736656	4.81003710
##	[697]	5.80686546	1.33977353	4.86438913	2.88223659	7.85254481	3.41567316
##	[703]	1.60110494	7.07190274	7.86757559	-1.05807654	2.47338565	4.00972242
##	[709]	2.17680371	5.39547221	5.76780268	7.62968241	-4.72500262	6.50175639
##	[715]	5.11528936	8.74033670	7.49175566	1.80922268	9.45582681	1.11953663
##	[721]	0.47396845	5.51722488	3.00526211	8.02222550	6.63724387	4.32199986
##	[727]	2.16407648	7.21763960	8.34145204	5.18998515	9.75254206	4.01177965
##	[733]	2.62164428	8.00148667	2.49126757	6.15633274	8.80145713	4.05516925
##	[739]	1.93420335	3.78017788	5.15882074	1.51093463	3.58621277	1.76020693
##	[745]	3.52327188	3.43686895	8.48756582	4.03267206	6.86979291	5.20392718
##	[751]	4.06692437	7.54747241	9.84130181	1.49172467	2.50008479	0.90074132
##	[757]	5.56430433	4.43089908	2.59888523	8.44537724	2.53242510	6.84435223
##	[763]	5.03163117	3.94155861	5.00110629	11.79860682	0.04759804	3.14108824
##	[769]	2.64102354	2.25933745	-0.06054436	6.61667650	9.75919425	10.23547451
##	[775]	5.57517389	4.24187498	0.63138766	1.95490882	9.63071715	1.94303379
##	[781]	5.60687831	5.80403273	9.03416828	9.88861381	5.41469702	8.16530497
##	[787]	1.51021495	1.76594576	3.35652152	-0.48753175	9.90064855	5.04386625
##	[793]	8.63111137	3.65843888	3.76781258	5.17585277	3.49299860	5.06267704

```
## [799] 3.95193169 8.13886166 5.14073333 4.11039385 5.48436585 4.66639687
## [805] 3.07062164 2.12137457 -0.76491060 4.01408918 4.53631173 4.77481192
## [811] 11.26539929 2.90452693 2.83901246 4.35786150 4.49967919 5.24479701
## [817] 4.56960148 -0.05324905 9.12260528 5.10475501 13.72887881 6.86093722
## [823] 2.90059152 1.45554296 4.38972848 5.44190259 8.64969211 6.48083815
## [829] 4.00506127 3.43992645 4.43052728 3.66419425 7.45634039 2.05446361
## [835] 4.47653515 5.67749628 8.94804666 7.35136310 3.57713853 5.66476568
## [841] 1.78933709 5.81347541 9.96874484 3.31185513 5.15327244 1.16135058
## [847] 3.90527762 8.46380979 2.64775070 -0.36106830 -1.20587383 7.15481160
## [853] 5.52604481 3.09335669 6.46713352 2.91922976 4.80469394 4.86073105
## [859] 1.19096878 4.06245144 5.92279259 6.79142713 -0.43296362 8.23841983
## [865] 0.65355550 7.82412005 5.89733621 4.07183159 2.78026706 4.94058662
## [871] 5.21140429 8.52876941 0.65055739 4.43561485 5.81016079 0.27497728
## [877] 10.88133377 3.96498793 3.21481138 8.50675056 4.85102906 1.98758188
## [883] 8.24525407 6.60612272 2.25475403 5.90745968 3.56985339 -0.47274495
## [889] 7.70086511 5.56298194 4.96591866 2.80811220 -0.95396373 5.55690618
## [895] 1.79611273 1.42411810 5.52116713 3.40779288 5.06083610 4.58333918
## [901] 6.75004598 7.55861933 8.24973061 10.96204277 4.45978897 5.39817928
## [907] 8.01673738 4.39973226 7.41137522 8.97464816 4.61179260 0.46071290
## [913] 7.42195792 6.57343007 7.37467711 4.90448195 1.85798504 3.94156079
## [919] 3.56960763 6.63051876 7.11988194 6.90984645 2.52902907 9.18028177
## [925] 3.95603791 2.64770252 3.89103739 3.95920938 2.58902359 7.61473704
## [931] 4.32141836 10.14156290 4.30617027 1.42067587 5.25686957 7.59729184
## [937] 5.61647822 1.46636064 6.77540200 1.35170759 3.13727898 6.17677989
## [943] 7.34200432 3.75042519 3.93313083 2.58768005 7.84556247 8.33092839
## [949] 3.80276180 4.49803319 7.95857828 2.67197762 8.45587525 5.85013853
## [955] 6.12696436 3.90367625 9.64212560 7.06880165 9.09334765 3.68513660
## [961] 3.81554272 5.24070033 11.71934638 5.77257214 3.55185095 6.22977968
## [967] 2.88794608 7.55651044 2.14455506 6.35323117 9.22006397 3.28283636
## [973] 1.58740018 0.46436190 7.86582741 1.75007732 7.97051723 1.56164028
## [979] 9.91067480 8.16945498 2.45625795 5.75225639 8.14194844 5.12802089
## [985] 3.82499290 -2.33659363 8.73273384 3.57942088 -0.42726030 5.75277412
## [991] 6.30286482 5.71743222 2.20224070 4.08408040 1.76482934 5.77121762
## [997] 8.02149101 3.19325878 3.64673793 8.41844504
```

```
muestra2 <- rnorm(1000,5,3)
hist(muestra2)
```


Histogram of muestra2



#2

```
p <- 500
rexp(500, 1/20)
```

```
## [1] 44.73699464 41.17670920 16.08085077 8.20827282 7.68963920
## [6] 11.64751963 6.95264368 9.55051078 0.76863892 3.58146181
## [11] 6.25996129 30.52522875 48.32504219 1.52108968 2.52051610
## [16] 8.63116523 56.44373361 0.22699794 32.49071494 9.72674600
## [21] 0.39238847 23.49109130 28.74392249 9.91499661 15.18657947
## [26] 22.51429255 6.85149772 22.51984381 10.38135940 15.14392063
## [31] 16.21288655 0.94398402 23.43401311 3.26193732 0.43656438
## [36] 5.44148299 3.63530858 18.50597141 14.23441573 12.85351591
## [41] 16.86388496 13.37015781 24.49584633 28.11664626 17.37270294
## [46] 16.87411606 5.91852825 58.72104749 9.18891241 2.71558602
## [51] 3.42472101 22.73588099 16.05331214 44.95879629 100.29039952
## [56] 25.66329470 7.46860512 0.05300595 7.06952155 34.55188979
## [61] 9.16822409 13.33278385 27.11196143 72.01753583 34.54926979
## [66] 1.56466049 48.13687037 29.35847327 13.66097199 48.38876102
## [71] 24.42766547 29.76522546 1.25534331 21.20877903 5.69373323
## [76] 14.86053079 15.03068313 23.79401418 0.08623170 14.13443842
## [81] 68.93654897 16.92300113 17.01285319 2.17366477 66.72945092
## [86] 13.67205384 4.27691448 4.25979908 5.52219259 6.71138566
## [91] 8.60151746 34.67244819 4.57338032 22.32552566 10.81185680
## [96] 19.58632160 2.89908414 13.62264086 31.89420692 4.95923061
## [101] 2.11580790 20.60143651 40.87233160 57.28699794 31.94099083
## [106] 18.36173444 6.32737787 12.84444872 0.37124396 4.01475222
## [111] 14.79076932 7.33174046 14.22075864 0.91682344 37.59218387
## [116] 71.18179746 5.56299567 1.60608180 8.99302545 25.36571987
## [121] 42.17474951 17.63837489 0.69121356 3.94929075 40.28480727
```

## [126]	16.81532394	13.43702399	0.45638650	8.53742867	14.54092786
## [131]	0.64539446	59.49025586	25.47164766	31.06181457	6.85088585
## [136]	10.33864919	10.51193243	67.32445135	43.97217169	3.42259621
## [141]	28.53549048	50.38804058	13.73184829	3.25892783	41.24487769
## [146]	53.55530720	6.13431533	3.32199365	9.02241835	7.84622885
## [151]	81.12907599	16.25929124	7.87831672	14.43930849	4.20277886
## [156]	4.37785165	33.90159748	4.79947077	18.27843973	59.33368659
## [161]	16.28458349	27.41946936	20.06829414	14.53449785	39.67475112
## [166]	24.12107883	1.73925743	11.14419689	17.56014898	29.04015703
## [171]	47.88595875	3.01915928	2.10720908	2.76583144	7.69068513
## [176]	17.64672689	24.71510461	20.57357227	51.24756600	62.00404063
## [181]	3.83037653	2.70630994	27.67770804	26.18246924	3.63833846
## [186]	21.19987177	1.80993848	13.75523060	15.58127861	107.85227510
## [191]	7.90749288	22.40032910	5.31257681	26.54491311	1.95934656
## [196]	11.17725191	9.56031443	1.67156376	0.13700970	3.06178004
## [201]	6.62681423	27.97649765	9.94033453	0.24982692	5.23146759
## [206]	26.34970451	7.24434080	15.32734781	1.93828371	25.51236536
## [211]	6.90255931	2.45353211	5.20861545	47.72328947	6.86575796
## [216]	16.81894923	30.54200463	7.78140330	24.29850787	23.01652903
## [221]	93.13797391	3.94022446	18.22804586	45.85868668	15.30402282
## [226]	0.52374211	16.90319022	45.62050234	34.68492478	42.47304254
## [231]	21.99808285	14.16333777	13.22131540	8.82983873	1.14726563
## [236]	36.05904963	48.92172742	33.93012710	2.01219881	0.85899338
## [241]	24.98633878	18.33562661	7.88787171	34.32139572	6.17473057
## [246]	59.27984608	43.72332368	19.84073087	3.46870773	1.25519829
## [251]	12.06704622	3.42213953	22.74846608	36.09535102	4.40331049
## [256]	10.91978984	35.53565747	60.70459269	0.37283811	39.00997814
## [261]	7.84904600	56.98260334	20.61985429	14.74884346	36.94363758
## [266]	59.70331579	5.20132375	3.29278019	2.54260900	7.35970191
## [271]	13.92981794	24.10834119	18.19992051	60.34997925	1.09791232
## [276]	3.50601823	3.27007248	1.06049025	79.89718210	9.24654954
## [281]	40.44001262	15.69699360	2.22336655	36.16316752	37.49163035
## [286]	16.84821380	11.13552219	26.98829954	3.30343039	5.31615539
## [291]	28.29705268	33.53704698	1.91097467	34.62530564	26.49480217
## [296]	5.75308148	3.46399485	54.82404839	18.66925051	71.62080956
## [301]	33.56155164	8.43013444	3.35643631	1.57895666	45.43394748
## [306]	18.87577340	26.86843699	27.84828331	20.46908971	34.13582451
## [311]	3.58885624	3.10522635	4.60520217	20.27260288	41.53674479
## [316]	0.94100087	51.74020473	1.44067512	15.79533339	9.06551007
## [321]	8.79593826	34.32846665	24.68764072	46.27316255	4.99525534
## [326]	24.75353205	1.60791298	33.54435868	4.00333869	24.77450974
## [331]	7.10012067	17.74989268	6.96134822	8.15035263	25.63066805
## [336]	13.23431433	6.69326248	86.09378803	9.20687022	1.39759289
## [341]	29.52484641	3.97693793	10.90126677	0.91366954	141.23388373
## [346]	28.90710522	24.35921755	8.63050969	11.62919299	17.34475449
## [351]	17.75411652	15.19937850	7.63682461	50.65418023	37.33390860
## [356]	1.68502710	8.15797456	1.57249946	0.17919096	21.02707373
## [361]	22.32591950	26.91991864	41.13478210	25.18960357	75.73681370
## [366]	2.99235819	32.22016278	30.59153620	8.44724177	44.23227321
## [371]	22.80411750	7.61088062	5.86422559	14.72744293	4.66087414
## [376]	16.14598218	5.93553507	3.81071410	10.82189267	3.26519569
## [381]	45.25880147	64.58316676	31.74488086	9.02074340	25.05577359
## [386]	29.16323471	35.90860151	27.19434190	15.30745121	7.08569337
## [391]	7.15204495	0.37013994	28.96435580	3.01663644	1.44818431

```
## [396] 11.28693069 10.17854458 19.90602478 2.55785713 16.37020298
## [401] 11.07598539 30.92562491 4.38423863 43.37740998 33.17033443
## [406] 3.99155958 20.68048045 36.66011499 11.85388138 35.19859478
## [411] 1.32399967 7.65858929 87.80610360 1.21262082 70.96658539
## [416] 45.38786497 3.48202162 1.53320554 37.38343473 7.57241356
## [421] 5.58377833 5.04801378 19.59046649 4.41013150 23.06785470
## [426] 27.71790083 9.90847405 22.45111636 5.66914073 0.65900073
## [431] 31.02086060 4.08143961 25.31530356 18.79671160 31.20438758
## [436] 5.04981731 22.77622674 89.29880528 5.43975933 17.32718814
## [441] 26.51984833 20.12248548 76.17081846 24.38624868 11.63465861
## [446] 0.79512621 57.47850045 33.87410484 55.87356537 35.24409996
## [451] 6.75801080 24.48991068 23.21114127 17.66481711 18.12130847
## [456] 2.49316230 28.14305045 7.08929745 20.63867118 1.65122593
## [461] 9.68470182 11.39609440 16.47985419 23.18461351 33.95644847
## [466] 38.77648763 39.18123562 7.73051388 12.38683784 3.87630411
## [471] 51.11322692 16.27690256 18.26455178 11.21785671 30.48420621
## [476] 4.51904861 2.56169816 51.20356749 0.76361267 14.05045720
## [481] 20.80040825 57.09634497 28.06946203 10.72802937 5.82475998
## [486] 9.61231660 13.73035191 0.27408173 12.02181867 21.21585760
## [491] 13.91107827 13.86464836 10.22202937 39.89865057 5.68854732
## [496] 0.48444417 14.80384608 12.25052769 4.49315816 32.02110249
```

```
muestra3 <- rexp(200, 1/20)
```

```
#A
```

```
mean(muestra3)
```

```
## [1] 19.09918
```

```
#[1] 20.80349 Es mayor al valor esperado de la muestra.
```

```
qexp(0.33, 1/20, lower.tail = T, log.p = F)
```

```
## [1] 8.009551
```

```
#[1] 8.009551 Es mayor que el cuantil.
```

```
boxplot(muestra3)
```

