Daniel Engbert
3-12-17
Project 1 - Stat 355

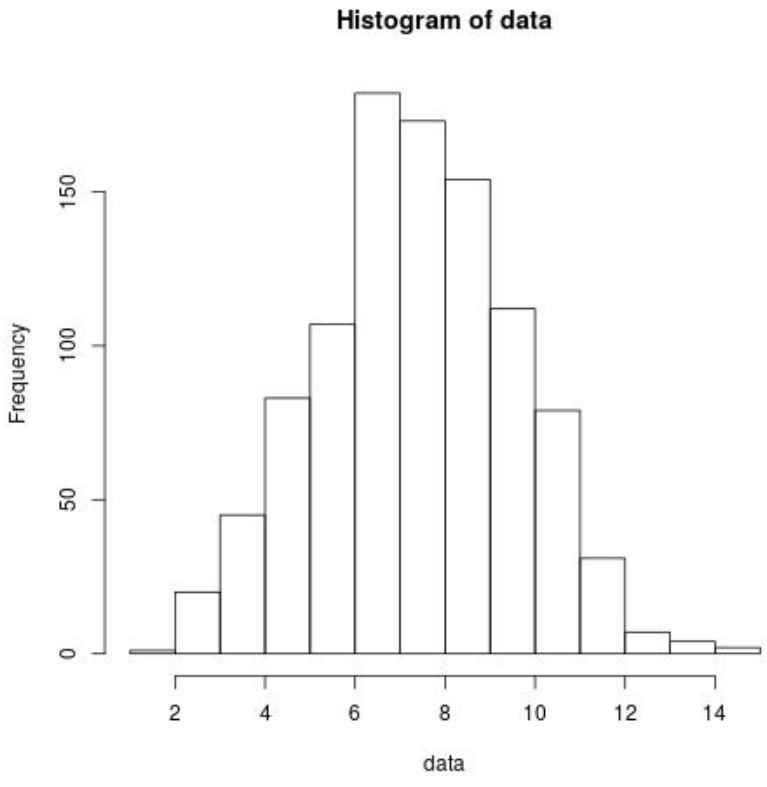
Part1 Output:

[1] 7.88
[1] 4.842442
[1] 2.200555

```
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   1.00    6.00    8.00    7.88    9.00   15.00
```

```
      0     1      2       3      4       5       6       7       8       9
freq  0 1e+00 0.0000 20.0000 45.000 83.0000 107.0000 182.0000 173.0000 154.0000
rfreq 0 1e-03 0.0000  0.0200  0.045  0.0830   0.1070   0.1820   0.1730   0.1540
PDF   0 5e-04 0.0031  0.0123  0.035  0.0746   0.1244   0.1659   0.1797   0.1597
          10     11      12     13     14     15    16 17 18 19 20
freq  112.0000 79.000 31.0000 7.0000 4.0000 2.0000 0e+00  0  0  0  0
rfreq   0.1120  0.079  0.0310 0.0070 0.0040 0.0020 0e+00  0  0  0  0
PDF     0.1171  0.071  0.0355 0.0146 0.0049 0.0013 3e-04  0  0  0  0
```

Outputted Histogram:



Part 2 Output (problem 3.58):

when max allowed defectives = 2 and sample size = 10
p = 0.01 P(batch accepted) = 0.9998862
p = 0.05 P(batch accepted) = 0.9884964
p = 0.1 P(batch accepted) = 0.9298092
p = 0.2 P(batch accepted) = 0.6777995
p = 0.25 P(batch accepted) = 0.5255928

when max allowed defectives = 1 and sample size = 10
p = 0.01 P(batch accepted) = 0.9957338
p = 0.05 P(batch accepted) = 0.9138616
p = 0.1 P(batch accepted) = 0.7360989
p = 0.2 P(batch accepted) = 0.3758096
p = 0.25 P(batch accepted) = 0.2440252

when max allowed defectives = 2 and sample size = 15
p = 0.01 P(batch accepted) = 0.9995842
p = 0.05 P(batch accepted) = 0.9637998
p = 0.1 P(batch accepted) = 0.8159389
p = 0.2 P(batch accepted) = 0.3980232
p = 0.25 P(batch accepted) = 0.2360878

Outputted Plots (part 2):