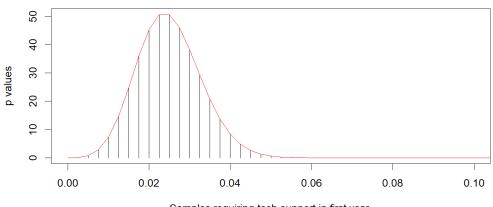
Lab Challenge 06

Part 1:

a.

Sampling distribution for 400 samples



Samples requiring tech support in first year.

b. pbinom(3, n, p) - pbinom(2, n, p) = 0.007135381

c.

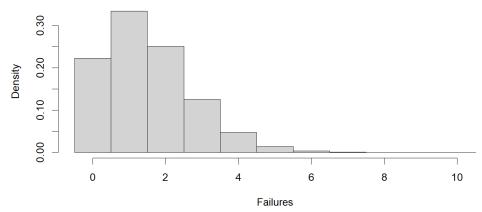
i. pnorm(0.03, mu. x. vals, sig. x. vals) - pnorm(0.02, mu. x. vals, sig. x. vals) = 0.1791528

ii. pnorm(0.035, mu. x. vals, sig. x. vals) - pnorm(0.025, mu. x. vals, sig. x. vals) = 0.1746935

Part 2:

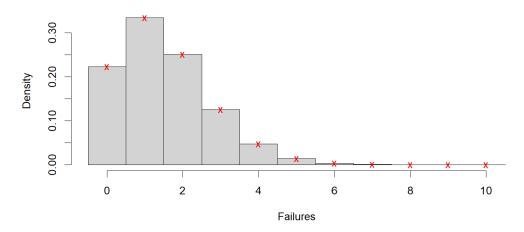
a.

Histogram for hard drive failures per hour



b. mu.X.fail = mean(data\$X.fail) = 1.499716sig.X.fail = sd(data\$X.fail) = 1.223023 c.

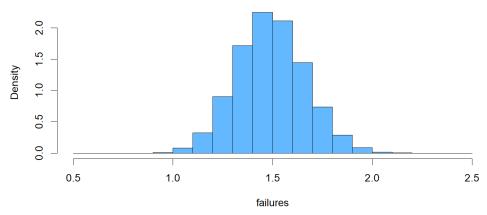
Histogram for hard drive failures per hour



Part 3:

a.

Histogram for X.fail(n = 50)

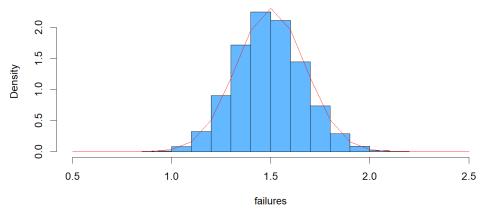


b.
$$m.xbar = mean(xbar) = 1.50064$$

 $sd.xbar = sd(xbar) = 0.1728817$

c.

Histogram for X.fail(n = 50)



d. lowerBound = m.xbar - (2 * sd.xbar) = 1.154877upperBound = m.xbar + (2 * sd.xbar) = 1.846404