Module 15 homework

Mason Deja

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Confidence Regions

1. A=0.02762,B=Upper,C=1.645,D=73+1.645(20)/sqrt(30)=79.006, E= one is 95% confident that something is less than 79.006. By conﬁdent, it is meant that 95% of all 95% conﬁdence regions will contain µ.
2. A=0.152,B=Not equals,C=1.645,D=1370+1.645(800)/sqrt(40)=1578.077,E= one is 95% that something is not equal to 1578.077. By conﬁdent, it is meant that 95% of all 95% conﬁdence regions will contain µ.

Beetle Size

1. Confidence region=195.428(190+1.645(14)/(sqrt(18)
2. One is 95% positive that that the thorax size for Halticus oleracea is less than 195.428. By conﬁdent, it is meant that 95% of all 95% conﬁdence regions will contain µ.

Calf Sizes

1. The required sample size is 106.158. (2.57829\*200)/(50)=10.30033^2=106.158

R Stuff

#confidenceRegions

library(NCStats)

distrib(73, mean=80,sd=20/sqrt(30))

distrib(1370,mean=1500,sd=800/sqrt(40))

#beetles

library(NCStats)

setwd("~/R stuff")

df<-read.csv("Beetles.csv")

hc<-filterD(df,species=="Halticus.oleracea")

str(hc)

distrib(190,mean=194.16,sd=14)