Module 8

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SAT scores

1. The type of variable sat scores is quantitative discrete.
2. The proportion of students not accepted by school A is 0.2209.
3. The percentage of student’s accepted by school B is 6.19%.
4. The percentage of students accepted by school A but not by B is 15.89%.
5. The score that school C should use to only accept 25% of students is 506.158.

Urban deer relocation

1. The proportion of deer that have home ranges between 0.2 and 0.4 km is 0.7074901.
2. The proportion of deer that have home range sizes greater than 0.32km is 0.4166.
3. 0.391 is how big the home range such that 17% of deer have a larger home range.
4. 0.583 is how big the home range such that 32% of deer have a smaller home range.
5. The proportion of deer that have a home range size less than 0.4km is 0.8537.
6. Between 0.295 and 0.305 are the most common home ranges for 48% of deer.

R code

#SAT

library(NCStats)

( distrib(500,mean=550,sd=65))

A<-( distrib(650,mean=550,sd=65,lower.tail = FALSE))

A\*100

A<-distrib(500,mean=550,sd=65,lower.tail = FALSE)

B<-distrib(650,mean=550,sd=65)

A-B

0.1589103\*100

distrib(0.25,mean=550,sd=65,type="q")

#Deer

A<-distrib(0.4,mean=0.30,sd=0.095)

B<-distrib(0.2,mean=0.30,sd=0.095)

A-B

distrib(0.32,mean=0.30,sd=0.095,lower.tail = FALSE)

distrib(.17,mean=0.30,sd=0.095,lower.tail = FALSE,type="q")

distrib(0.32,mean=0.30,sd=0.095)

distrib(0.4,mean=0.30,sd=0.095)

distrib(0.48,mean=0.30,sd=0.095,type="q")

distrib(0.52,mean=0.30,sd=0.095,type="q")