Session-8-Assignment-3

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July 4, 2018

#1. A recent national study showed that approximately 44.7% of college students have used Wikipedia as a source in at least one of their term papers. Let X equal the number of students in a random sample of size n = 31 who have used Wikipedia as a source. Perform the below functions

# a. Find the probability that X is equal to 17  
dbinom(17,size = 31,prob = 0.447)

## [1] 0.07532248

# b. Find the probability that X is at most 13  
pbinom(13,size = 31,prob = 0.447)

## [1] 0.451357

# c. Find the probability that X is bigger than 11  
pbinom(11,size = 31,prob = 0.447,lower.tail = F)

## [1] 0.8020339

# d. Find the probability that X is at least 15  
pbinom(14,size = 31,prob = 0.447,lower.tail = F)

## [1] 0.406024

# e. Find the probability that X is between 16 and 19, inclusive  
sum(dbinom(16:19,size = 31,prob = 0.447))

## [1] 0.2544758