**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**

***Ans:***

dbinom(17, 31, 0.447)

# The probability of X equal to 17 is 0.0753.

**b. Find the probability that X is at most 13**

***Ans:***

pbinom(13, 31, 0.447)

# The probability of X at most 13 is 0.4513

**c. Find the probability that X is bigger than 11.**

***Ans:***

pbinom(11, 31, 0.447)

# The probability of X bigger than 11 is 0.8020.

**d. Find the probability that X is at least 15.**

***Ans:***

pbinom(14, 31, 0.447)

# The probability of X at least 15 is 0.4060.

**e. Find the probability that X is between 16 and 19, inclusive.**

***Ans:***

sum(dbinom(16:19, 31, 0.447))

# The probability of X between 16 and 19, inclusive is 0.2545