**Assignment 8.3**

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**

1. **Find the probability that X is equal to 17**

**Ans**: > x<-17

> n<-31

> p<-.44

> dbinom(x,n,p)

[1] 0.06868672

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

**Ans**:

> x<-13

> pbinom(x,n,p)

[1] 0.4827758

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

**Ans:**

> x<-11

> 1-pbinom(x,n,p)

[1] 0.7794649

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

**Ans:** > x<-15

> ppois(x,n,lower.tail = FALSE)

[1] 0.9988586

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

**Ans**: > x<-16

> y<-19

> runif(n,x,y)

[1] 18.02434 16.18406 17.32764 16.47822 17.45061 17.43549 16.16116 18.64842 16.54918

[10] 18.66261 18.42275 18.13119 16.31087 16.40613 18.81015 18.21750 16.20700 17.14038

[19] 17.79433 16.47287 17.74607 16.90233 17.91694 17.38391 17.76874 18.32919 16.88985

[28] 17.86265 18.02587 18.29617 18.01138