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> #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 pap
ers.
> #Let X equal the number of students in a random sample of size n = 31 who h
ave
> #used Wikipedia as a source.
> #Perform the below operations:
> #a. Find the probability that X is equal to 17
> dbinom(17,31,0.447)
[1] 0.07532248
> #Probability of X=17 is 0.07532248
> #b. Find the probability that X is at most 13
> pbinom(13,31,0.447)
[1] 0.451357
> #Probability of X is at most 13 is 0.451357
> #c. Find the probability that X is bigger than 11
> pbinom(11,31,0.447,lower.tail = FALSE)
[1] 0.8020339
> #Probability of X bigger than 11 is 0.8020339
> #d. Find the probability that X is at least 15.
> pbinom(14,31,0.447,lower.tail = FALSE)
[1] 0.406024
> #Probability of X at least 15 is 0.406024
> #e. Find the probability that X is between 16 and 19, inclusive
> diff(pbinom(c(19,15),31,0.447,lower.tail = FALSE))
[1] 0.2544758
> #Probability of X is between 16 and 19, inclusive is  0.2544758
```