**Assignment 4\_5**

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

Here n=31, prob=44.7/100

Using dbinom(q,n,p)

Dbinom(17, 31, 44.7/100)

https://lh4.googleusercontent.com/6NjoQLZCRnaK1bPq8sVbtDCdh4j-xJqIyCxD6BX0czLCOcFeFazD4aTXEOnemuE1GLIU_zZ30D4bSdN01GhAx_3H4Xedx0ahruKKU_zyUnGUUVnMXd837l4fV_0IPRB8z_1E0zYBju8X4faQrQ

1. Find the probability that X is at most 13

Pbinom(13, 31, 44.7/100)

https://lh3.googleusercontent.com/-vJi_ZIQVCxjew53jEDOhv4PNNqa4Rwo4yI0u98r1EXUfiLUs_ceCRHLt4SVFvp_znbwvG4RMgyhZuYIhl-iozRLOqtBRfRsFJoUaciT81AEZT2GhvMKUcw-Y6pFOooRNeT71-rz3LX_XlUAPw

1. Find the probability that X is bigger than 11.

Pbinom(11, 31, 44.7/100, lower.tail = FALSE)

https://lh3.googleusercontent.com/rRV6lNRAa2x_riz0XuTIRq9dLmXKB3SWZfpiTAZLyGx4Y2ZzrZSspP9On84y58V6R4e1jG4Pg0MZFPyDdWVR1fotxBxaCHPM6MBWo8Wg9ieRzlLH2anMgxuzaypN_ibylK9n3yukXRv6aHS7eg

1. Find the probability that X is at least 15.

Pbinom(15, 31, 44.7/100)

https://lh5.googleusercontent.com/G_bfindUOdELYFUAAtvtB2aAg2Ji-11u43VLXftLN87RDOOSPruw8sYfqAfmvP0V_njazMWaOBvmAJjeTIDP1ryCGNlCBrpZYtAQBW2P-m1nZs8Pbw4_J4tTShxW0y2oDHJdbDDa-6erFnieAg

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

      sum(dbinom(16:19, 31, 44./100))

https://lh3.googleusercontent.com/Lac3D7jw_rcB4_7a2-GV_dx0gQvw6uqPbtNg3XANlDERWifQbfR1dl4Om78yCB79mGoqixUHsNOuSV8NsUA1NLcVDs36c7rIxqkDRdvtXTi0LmLCdSlYqqMD_gvkw70cD4vLfEctF76TuWOBXA