Possible values for number of subjects failed = 0, 1, 2, 3

p(x = 0) = 80/100 = 0.8

p(x = 1) = 10/100 = 0.1

p(x = 2) = 7/100 = 0.07

p(x = 3) = 3/100 = 0.03

Probability distribution function: