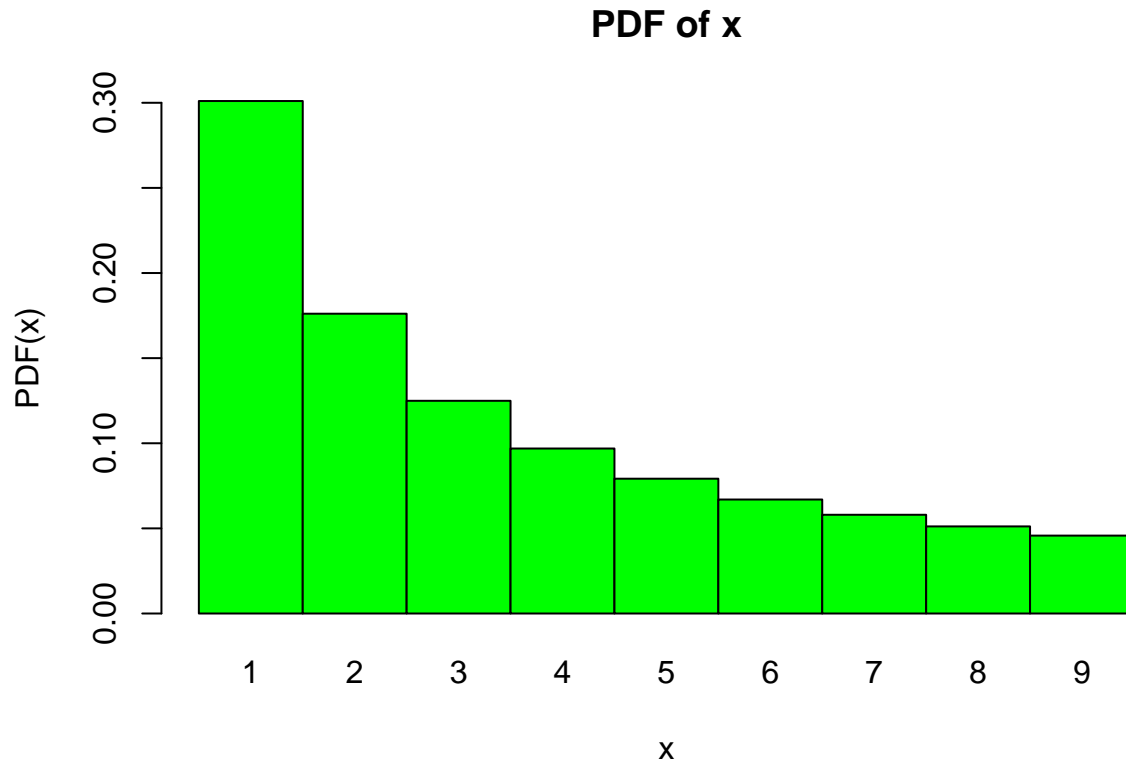


4c.

PDF could be plot by plotting  $p(x)$  where  $p(x) = \log(\frac{x+1}{x})$

Plot of PDF could be done by following:

```
x <- (1:9) ##vector from 1 to 9 which will serve as x values
barplot(log10((x+1)/x), space = FALSE, main = "PDF of x",
        names.arg = x, xlab = "x", ylim = c(0, 0.30), ylab = "PDF(x)",
        col = "green1") ##a bargraph of PDF
```



Obviously, this distribution is not a uniform distribution, since the probability of each x differs significantly. As x increases, probability, or PDF(X) decreases rather than staying constant. Visually, a PDF of uniform distribution would look like a straight horizontal line, since the probability of each x is identical. However, this distribution looks like a stair case, indicating that the distribution is not uniform.