1)
a)E_{10} $=\max\{E_4,E_9,E_8\}+T_{10}$
  $=\max\{E_2+T_4,\max\{E_5,E_6,E_7\}+T_9,E_3+T_8\}+T_{10}$
  $=\max\{E_1+T_2+T_4,\max\{E_2+T_5,E_3+T_6,E_3+T_7\}+T_9,E_1+T_3+T_8\}+T_{10}$
  $=\max\{T_1+T_2+T_4,\max\{T_1+T_2+T_5,T_1+T_3+T_6,T_1+T_3+T_7\}+T_9,T_1+T_3+T_8\}+T_{10}$

b)Approximate value of E_{10} using simple monte carlo=18.197

c)
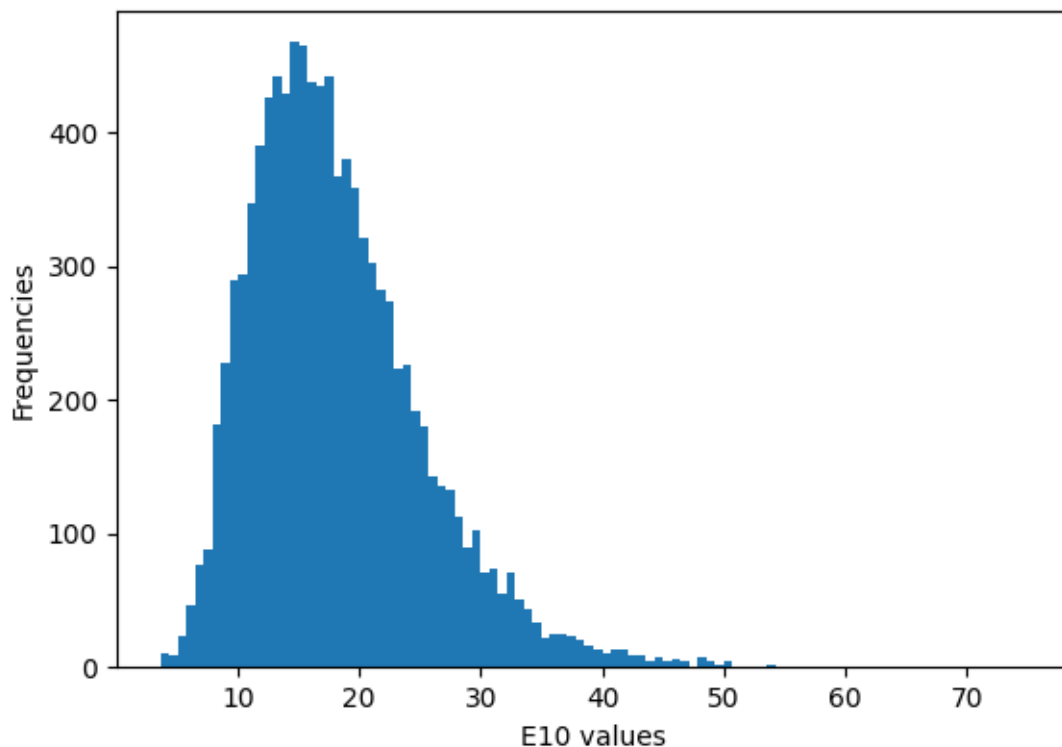
there are very less values above 70: only 3.It has most of its values around 20.
skewness=1.1662

d)probability of deadline miss using simple monte carlo:0.0003
standard deviation:0.017317909804592472

e)probability of deadline miss using importance monte carlo:2.385931687577897e-05
standard deviation:0.0007458226294535806
effective sample size: 3.0235854981079737

f)

κ	Probability(in 10^{-5} units)	Standard deviation	Effective sample size
3	3.248	0.000181	907.38
4	2.970	0.000149	351.41
5	3.702	0.000194	153.82

g)
f) has larger effective sample sizes than e) and smaller standard deviation than e) and is likely to have more value.

An intuitive explanation of why this is happening is as follows:

as compared to e),f) has larger maximum likelihood ratio values(because the p/q=($\dfrac{\theta e^{-x/\theta}}{k\theta e^{-x/k\theta}}$)

values are larger for smaller theta for given κ's in the question and a given x) and E10 values were made to increase by increasing 1,2,4,10 values because 1,10 directly increase E10 and 2,4 is more likely to be bigger than the other terms in the max() in the formula for E_{10} because of their large mean values.

h)99% confidence interval for the κ with minimum effective sample size:
for κ=5,[$3.201*10^{-5}$,$4.204*10^{-5}$]