

the probability of losing n games:

$$P(n) = C_{82}^n (20\%)^n (80\%)^{82-n}$$

when lose n games, $2 \leq n \leq 27$

the number of cases without consecutive loss is

$$C_{82-2n}^0 \times C_{n+1}^1 + C_{82-2n}^1 \times C_{n+1}^2 + C_{82-2n}^2 \times C_{n+1}^3 + \dots + C_{82-2n}^n \times C_{n+1}^{n+1} = N_1$$

when $28 \leq n \leq 41$,

the number of cases without consecutive loss is

$$C_{82-2n}^0 \times C_{n+1}^1 + C_{82-2n}^1 \times C_{n+1}^2 + \dots + C_{82-2n}^{82-2n} \times C_{n+1}^{82-2n} = N_2$$

when $n \geq 42$, team suffer from consecutive loss anyway, $N_3 = 0$.

define function number of case with consecutive loss $f(n) = \begin{cases} N_1 & 2 \leq n \leq 27 \\ N_2 & 28 \leq n \leq 41 \\ N_3 & 42 \leq n \leq 82 \end{cases}$

the probability of suffering from consecutive loss is

$$P = \sum_{n=2}^{82} f(n) \times (0.2)^n \times (0.8)^{82-n}$$
$$= 94.12$$