Exercício 02 - SEM 12

$N=10 \quad K=3 \quad n=4 \quad p=\frac{K}{N}=\frac{3}{10}=0,3$

$$P(X=K)=\frac{\binom{K}{K}\binom{N-K}{n-K}}{\binom{N}{n}}$$

$$P(X=0)=\frac{\binom{3}{0}\binom{7}{4}}{\binom{10}{4}}=0,166$$

$$P(X=1)=\frac{\binom{3}{1}\binom{7}{3}}{\binom{10}{4}}=0,500$$

$$P(X=2)=\frac{\binom{3}{2}\binom{7}{2}}{\binom{10}{4}}=0,300$$

$$P(X=3)=\frac{\binom{3}{3}\binom{7}{1}}{\binom{10}{4}}=0,033$$

$$P(X=4)=\frac{\binom{3}{4}\binom{7}{0}}{\binom{10}{4}}=0 \text{ (erro)}$$

$F(x)=P(x \leq x)$

Função de Probabilidade

$P(X=0)=0,166$
$P(X=1)=0,500$
$P(X=2)=0,300$
$P(X=3)=0,033$
$P(X=4)=0$

$$F(x)\begin{cases} 0,166 & \text{se } x=0 \\ 0,500 & \text{se } x=1 \\ 0,300 & \text{se } x=2 \\ 0,033 & \text{se } x=3 \\ 0 & \text{se } x=4 \end{cases}$$

Função de Distrib. Cumulativa

$$F(x)\begin{cases} 0 & \text{se } x<0 \\ 0,166 & \text{se } 0 \leq x<1 \\ 0,500 & \text{se } 1 \leq x<2 \\ 0,300 & \text{se } 2 \leq x<3 \\ 0,033 & \text{se } 3 \leq x<4 \\ 0 & \text{se } x \geq 4 \end{cases}$$