

Distribución	Valores Posibles	f.d.p	μ	σ^2	$\varphi_X(t)$	$F_X(x_i)$
Distribución de Bernoulli	$x=0,1$	$f_X(x) = p^x q^{1-x}$	p	pq	$\varphi_X(t) = q + pe^t$	
Distribución Binomial	$X=0,1,2,\dots,n$	$f_X(x) = \binom{n}{x} p^x q^{n-x}$	np	npq	$\varphi_X(t) = (q + pe^t)^n$	$F_X(x) = \sum_{i=0}^x \binom{n}{i} p^i q^{n-i}$
Distribución Geométrica	$X=1,2,3,\dots,n$	$f_X(x) = q^{x-1}p$	$\frac{1}{p}$	$\frac{q}{p^2}$	$\varphi_X(t) = \frac{pe^t}{1 - qe^t}$	$F_X(x) = 1 - q^x$ si $P(X \leq x)$ $F_X(x) = q^x$ si $P(X > x)$
Distribución Hipergeométrica	$\max(0, n-r_2) \leq x \leq \min(r_1, n)$	$f_X(x) = \frac{\binom{r_1}{x} \binom{r_2}{n-x}}{\binom{n}{r_1}}$	$n \frac{r_1}{r}$	$n \left(\frac{r_1}{r}\right) \left(1 - \frac{r_1}{r}\right) \left(1 - \frac{n-1}{r-1}\right)$	$\varphi_X(t) = \sum_{i=\max(0, n-r_2)}^{\min(n, r_1)} e^{tX} \frac{\binom{r_1}{i} \binom{r_2}{n-i}}{\binom{n}{r_1}}$	$F_X(x) = \sum_{i=\max(0, n-r_2)}^x \frac{\binom{r_1}{i} \binom{r_2}{n-i}}{\binom{n}{r_1}}$
Distribución de Poisson	$X=0,1,2,\dots,n$	$f_X(x) = e^{-\lambda} \frac{\lambda^x}{x!}$	λ	λ	$\varphi_X(t) = e^{\lambda(e^t - 1)}$	$F_X(x) = \sum_{k=0}^x e^{-\lambda} \frac{\lambda^k}{k!}$
Aproximación Binomial a Poisson	$X=0,1,2,\dots,n$	$f_X(x) = e^{-(np)} \frac{(np)^x}{x!}$	$\lambda = np$	$\lambda = np$	$\varphi_X(t) = e^{np(e^t - 1)}$	$F_X(x) = \sum_{k=0}^x e^{-(np)} \frac{(np)^k}{k!}$