

Name	Param	Def	Dom	$\mathbb{E}[X]$	$\text{Var}[X]$	fgm
Bernoulli	p	$P(X = k) = p_X(k) = \begin{cases} p & \text{si } k = 1 \\ q & \text{si } k = 0 \end{cases}$	$k = 0, 1$	p	pq	$e^t + q$
Binomial	$n; p$	$P(X = k) = p_X(k) = \binom{n}{k} p^k q^{n-k}$	$k = 0, 1, \dots, n$	np	npq	$(e^t + q)^n$
Geométrica	p	$P(X = n) = p_X(n) = q^{n-1}p$	$n = 1, 2, \dots$	$\frac{1}{p}$	$\frac{q}{p^2}$	$\frac{pe^t}{1 - qe^t}$
Pascal	$k; p$	$P(X = n) = p_X(n) = \binom{n-1}{k-1} q^{n-k} p^k$	$n = k, k + 1, k + 2, \dots$	$\frac{k}{p}$	$\frac{kq}{p^2}$	$\left(\frac{pe^t}{1 - qe^t} \right)^k$
Poisson	$\lambda > 0$	$P(X = k) = p_X(k) = \frac{e^{-\lambda} \lambda^k}{k!}$	$k = 0, 1, \dots$	λ	λ	$e^{\lambda(e^t - 1)}$
Hipergeométrica	n, r, N	$P(X = k) = p_X(k) = \frac{\binom{N-r}{n-k} \binom{r}{k}}{\binom{N}{n}}$	$k = 0, 1, \dots, n, r \geq n$	$n \left(\frac{r}{N} \right)$	σ^2	

Donde

$$\sigma^2 = n \left(\frac{r}{N} \right) \left(1 - \frac{r}{N} \right) \left(\frac{N-n}{N-1} \right)$$

¹Profesor: Vladimir Moreno G.