

Discrete

name and range	$P(k) = P(X = k)$ for $k \in \text{range}$	mean	variance
uniform on $\{a, a + 1, \dots, b\}$	$\frac{1}{b - a + 1}$	$\frac{a + b}{2}$	$\frac{(b - a + 1)^2 - 1}{12}$
Bernoulli (p) on $\{0, 1\}$	$P(1) = p; P(0) = 1 - p$	p	$p(1 - p)$
binomial (n, p) on $\{0, 1, \dots, n\}$	$\binom{n}{k} p^k (1 - p)^{n - k}$	np	$np(1 - p)$
Poisson (μ) on $\{0, 1, 2, \dots\}$	$\frac{e^{-\mu} \mu^k}{k!}$	μ	μ
hypergeometric (n, N, G) on $\{0, \dots, n\}$	$\frac{\binom{G}{k} \binom{N - G}{n - k}}{\binom{N}{n}}$	$\frac{nG}{N}$	$n \left(\frac{G}{N} \right) \left(\frac{N - G}{N} \right) \left(\frac{N - n}{N - 1} \right)$
geometric (p) on $\{1, 2, 3, \dots\}$	$(1 - p)^{k - 1} p$	$\frac{1}{p}$	$\frac{1 - p}{p^2}$
geometric (p) on $\{0, 1, 2, \dots\}$	$(1 - p)^k p$	$\frac{1 - p}{p}$	$\frac{1 - p}{p^2}$
negative binomial (r, p) on $\{0, 1, 2, \dots\}$	$\binom{k + r - 1}{r - 1} p^r (1 - p)^k$	$\frac{r(1 - p)}{p}$	$\frac{r(1 - p)}{p^2}$