The table of distributions for the Course "Theory of Probability "

X	k	$P(X=k)$	$E(X)$	$V(X)$
$U(1,n)$	$1,\dots n$	$\frac{1}{n}$	$\frac{n+1}{2}$	$\frac{n^2-1}{12}$
$B(n,p)$	$0,\dots n$	$\binom{n}{k}p^k(1-p)^{n-k}$	np	$np(1-p)$
$G(p)$	$1,2,\dots$	$p(1-p)^{k-1}$	$\frac{1}{p}$	$\frac{1-p}{p^2}$
$NB(m,p)$	$m,m+1,\dots$	$\binom{k-1}{m-1}p^m(1-p)^{k-m}$	$\frac{m}{p}$	$\frac{m(1-p)}{p^2}$
$H(a,b,n)$	$0,1,\dots n$	$\frac{\binom{a}{k}\binom{b}{n-k}}{\binom{a+b}{n}}$	$\frac{na}{a+b}$	$\frac{nab(a+b-n)}{(a+b)^2(a+b-1)}$
$P(\lambda)$	$0,1,\dots$	$e^{-\lambda}\frac{\lambda^k}{k!}$	λ	λ

X	t	$f_X(t)$	$F_X(t)$	$E(X)$	$V(X)$
$U(a,b)$	$a\le t\le b$	$\frac{1}{b-a}$	$\frac{t-a}{b-a}$	$\frac{a+b}{2}$	$\frac{(b-a)^2}{12}$
$\exp(\lambda)$	$t\ge 0$	$\lambda e^{-\lambda t}$	$1-e^{-\lambda t}$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$
$\Gamma(m,\lambda)$	$t\ge 0$	$\frac{\lambda^m t^{m-1}e^{-\lambda t}}{(m-1)!}$,		$\frac{m}{\lambda}$	$\frac{m}{\lambda^2}$
$N(\mu,\sigma^2)$	$-\infty<t<\infty$	$\frac{e^{\frac{-(t-\mu)^2}{2\sigma^2}}}{\sqrt{2\pi}\sigma}$	$\Phi(\frac{t-\mu}{\sigma})$	μ	σ^2