Distribuzione	**Parametri**	$\mathrm{P}(X = x) = p(x)$	R_X	$\mathbb{E}[X]$	$\mathrm{V}(X)$	$m_X(t)$
$\mathrm{Be}(p)$	$p \in (0,1)$	$p^x(1-p)^{1-x}$	$x = 0, 1$	p	$p(1-p)$	$1 - p + pe^t$
$\mathrm{Bin}(n,p)$	$n \in \mathbb{N} \setminus \{0\}, p \in (0,1)$	$\binom{n}{x} p^x (1-p)^{n-x}$	$x = 0, \ldots, n$	np	$np(1-p)$	$(1 - p + pe^t)^n$
$\mathrm{Ge}(p)$	$p \in (0,1)$	$p(1-p)^{x-1}$	$x = 1, 2, \ldots$	$\frac{1}{p}$	$\frac{1-p}{p^2}$	$\frac{pe^t}{1-(1-p)e^t}$ $t < -\ln(1-p)$
$\mathrm{NB}(r,p)$	$r \in \mathbb{N} \setminus \{0\}, p \in (0,1)$	$\binom{x-1}{r-1} p^r (1-p)^{x-r}$	$x = r, r+1, \ldots$	$\frac{r}{p}$	$\frac{r(1-p)}{p^2}$	$\left(\frac{pe^t}{1-(1-p)e^t}\right)^r$ $t < -\ln(1-p)$
$\mathrm{Po}(\lambda)$	$\lambda > 0$	$\dfrac{\lambda^x e^{-\lambda}}{x!}$	$x = 0, 1, \ldots$	λ	λ	$e^{\lambda(e^t - 1)}$
$\mathrm{U}(a,b)$	$a, b \in \mathbb{Z}$	$\dfrac{1}{b-a+1}$	$x = a, \ldots, b$	$\frac{a+b}{2}$	$\frac{(b-a+1)^2-1}{12}$	$\sum_{x \in \mathrm{R}_X} p(x) e^{xt}$
$\mathrm{Iper}(N,m,n)$	$N \in \mathbb{N} \setminus \{0\}, \quad m, n$	$\binom{m}{x}\binom{N-m}{n-x} \Big/ \binom{N}{n}$	$\mathrm{x} = \max\{0, n-(N-m)\}, \ldots, \min\{n,m\}$	$n\frac{m}{N}$	$n\frac{m}{N}\left(1 - \frac{m}{N}\right)\frac{N-n}{N-1}$	$\sum_{x \in \mathrm{R}_X} p(x) e^{xt}$

Tabella 1: Distribuzioni discrete notevoli

Distribuzione	**Parametri**	$f_X(x)$	R_X	$\mathbb{E}[X]$	$\mathrm{V}(X)$	$m_X(t)$
$\mathrm{U}(a,b)$	$a,b \in \mathbb{R} : a < b$	$\dfrac{1}{b-a}$	$a \leq x \leq b$	$\frac{a+b}{2}$	$\frac{(b-a)^2}{12}$	$\frac{e^{tb}-e^{ta}}{t(b-a)}$ $t \neq 0 \quad m_X(0) = 1$
$\mathrm{Beta}(\alpha,\beta)$	$\alpha > 0,\ \beta > 0$	$\dfrac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} x^{\alpha-1}(1-x)^{\beta-1}$	$0 \leq x \leq 1$	$\frac{\alpha}{\alpha+\beta}$	$\frac{\alpha\beta}{(\alpha+\beta)^2(\alpha+\beta+1)}$	
$\mathrm{Esp}(\lambda)$	$\lambda > 0$	$\lambda e^{-\lambda x}$	$x \geq 0$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$	$\frac{\lambda}{\lambda-t}$ $t < \lambda$
$\mathrm{Ga}(\alpha,\lambda)$	$\alpha > 0, \lambda > 0$	$\frac{\lambda^\alpha}{\Gamma(\alpha)} x^{\alpha-1} e^{-\lambda x}$	$x \geq 0$	$\frac{\alpha}{\lambda}$	$\frac{\alpha}{\lambda^2}$	$\left(\frac{\lambda}{\lambda-t}\right)^\alpha$ $t < \lambda$
χ^2_k	$k \in \mathbb{N} \setminus \{0\}$	$\frac{1}{2^{k/2}\Gamma(k/2)} x^{k/2-1} e^{-x/2}$	$x \geq 0$	k	$2k$	$\left(\frac{1/2}{1/2-t}\right)^{k/2}$ $t < 1/2$
$\mathcal{N}(\mu,\sigma^2)$	$\mu \in \mathbb{R},\ \sigma > 0$	$\dfrac{1}{\sqrt{2\pi}\sigma} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$	$x \in \mathbb{R}$	μ	σ^2	$e^{t\mu + t^2\sigma^2/2}$
$\mathrm{LogN}(\mu,\sigma^2)$	$\mu \in \mathbb{R},\ \sigma > 0$	$\frac{1}{x\sigma\sqrt{2\pi}} e^{-\frac{(\ln x-\mu)^2}{2\sigma^2}}$	$x > 0$	$e^{\mu+\sigma^2/2}$	$(e^{\sigma^2}-1)e^{2\mu+\sigma^2}$	
t_d	$d > 0$	$\frac{\Gamma\left(\frac{d+1}{2}\right)}{\sqrt{d\pi}\,\Gamma\left(\frac{d}{2}\right)} \left(1+\frac{x^2}{d}\right)^{-\frac{d+1}{2}}$	$x \in \mathbb{R}$	0 se $d > 1$	$\dfrac{d}{d-2}$ se $d > 2$	
$\mathrm{F}(d_1,d_2)$	$d_1 > 0,\ d_2 > 0$	$\frac{\Gamma\left(\frac{d_1+d_2}{2}\right)}{\Gamma\left(\frac{d_1}{2}\right)\Gamma\left(\frac{d_2}{2}\right)} \left(\frac{d_1}{d_2}\right)^{d_1/2} x^{d_1/2-1} \left(1+\frac{d_1}{d_2}x\right)^{-\frac{d_1+d_2}{2}}$	$x > 0$	$\frac{d_2}{d_2-2}$, se $d_2 > 2$	$\dfrac{2d_2^2(d_1+d_2-2)}{d_1(d_2-2)^2(d_2-4)}$, se $d_2 > 4$	

Tabella 2: Distribuzioni continue notevoli