Distribution	$f(x \mid \theta)$	$x \in \mathbb{X}$	$\theta \in \Theta$
Bernoulli(θ)	$\theta^x(1-\theta)^{1-x}$	$x = 0, 1$	$0 < \theta < 1$
(Discrete) Uniform(k)	$\dfrac{1}{k}$	$x = 1, 2, \ldots, k$	
Binomial(n, θ)	$\dbinom{n}{x}\theta^x(1-\theta)^{n-x}$	$x = 0, 1, \ldots, n$	$0 < \theta < 1$
Poisson(λ)	$\dfrac{\lambda^x\, e^{-\lambda}}{x!}$	$x = 0, 1, 2, \ldots$	$\lambda > 0$
Geometric(θ)	$(1-\theta)^{x-1}\theta$	$x = 1, 2, \ldots$	$0 < \theta < 1$
NegativeBinomial(n, θ)	$\dbinom{x+n-1}{n-1}(1-\theta)^x\theta^n$	$x = 0, 1, 2, \ldots$	$0 < \theta < 1,\ n = 1, 2, \ldots$
Uniform(α, β)	$\dfrac{1}{\beta-\alpha}$	$\alpha < x < \beta$	$\alpha < \beta$
Exponential(λ)	$\lambda \exp(-\lambda x)$	$x > 0$	$\lambda > 0$
Gamma(ν, λ)	$\dfrac{1}{\Gamma(\nu)}\lambda(\lambda x)^{\nu-1}\exp(-\lambda x)$	$x > 0$	$\lambda > 0,\ \nu > 0$
Cauchy(α, β)	$\dfrac{1}{\pi\beta\left\{1+\left(\frac{x-\alpha}{\beta}\right)^2\right\}}$	$-\infty < x < \infty$	$\beta > 0$
$N(\mu, \sigma^2)$	$\dfrac{1}{\sqrt{2\pi\sigma^2}}\exp\left\{-\dfrac{1}{2}\left(\dfrac{x-\mu}{\sigma}\right)^2\right\}$	$-\infty < x < \infty$	$\sigma^2 > 0$
Beta(α, β)	$\dfrac{1}{B(\alpha, \beta)}x^{\alpha-1}(1-x)^{\beta-1}$	$0 < x < 1$	$\alpha > 0,\ \beta > 0$
Weibull(α, β)	$\beta\alpha x^{\alpha-1}\exp(-\beta x^\alpha)$	$x > 0$	$\alpha > 0,\ \beta > 0$
χ^2_k	$\dfrac{1}{2^{k/2}\Gamma(k/2)}x^{(k/2)-1}\exp(-\frac{1}{2}x)$	$x > 0$	$k = 1, 2, \ldots$
t_m	$\dfrac{\Gamma((m+1)/2)}{\Gamma(m/2)\sqrt{\pi m}}\ \left(1+\dfrac{x^2}{m}\right)^{-(m+1)/2}$	$-\infty < x < \infty$	$m = 1, 2, \ldots$
Pareto(θ)	$\dfrac{\theta}{x^{\theta+1}}$	$x > 1$	$\theta > 0$

Distribution	$E(X)$	$\mathrm{var}\,(X)$	$G_X(z)$ or $M_X(t)$
Bernoulli(θ)	θ	$\theta(1-\theta)$	$1-\theta+\theta z$
(Discrete) Uniform(k)	$(k+1)/2$	$(k^2-1)/12$	$z(1-z^k)/\{k(1-z)\}$
Binomial(n,θ)	$n\theta$	$n\theta(1-\theta)$	$(1-\theta+\theta z)^n$
Poisson(λ)	λ	λ	$\exp\{-\lambda(1-z)\}$
Geometric(θ)	$\frac{1}{\theta}$	$\frac{1-\theta}{\theta^2}$	$\frac{\theta z}{1-z(1-\theta)}$
NegativeBinomial(n,θ)	$\frac{n(1-\theta)}{\theta}$	$\frac{n(1-\theta)}{\theta^2}$	$\left(\frac{\theta z}{1-z(1-\theta)}\right)^n$
Uniform(α,β)	$\frac{1}{2}(\alpha+\beta)$	$\frac{1}{12}(\beta-\alpha)^2$	$(e^{\beta t}-e^{\alpha t})/\{(\beta-\alpha)t\}$
Exponential(λ)	$1/\lambda$	$1/\lambda^2$	$\lambda/(\lambda-t)$
Gamma(ν,λ)	ν/λ	ν/λ^2	$\{\lambda/(\lambda-t)\}^\nu$
Cauchy	none	none	none
$N(\mu,\sigma^2)$	μ	σ^2	$\exp(\mu t+\frac{1}{2}\sigma^2 t^2)$
Beta(α,β)	$\frac{\alpha}{\alpha+\beta}$	$\frac{\alpha\beta}{(\alpha+\beta)^2(\alpha+\beta+1)}$	${}_1F_1(\alpha;\beta;t)$
Weibull(α,β)	$\beta^{-1/\alpha}\Gamma\left(1+\frac{1}{\alpha}\right)$	$\beta^{-2/\alpha}\left\{\Gamma\left(1+\frac{2}{\alpha}\right) - \left[\Gamma\left(1+\frac{1}{\alpha}\right)\right]^2\right\}$	none
χ^2_k	k	$2k$	$(1-2t)^{-k/2}$
t_m	0	$\frac{m}{m-2}$	none
Pareto(θ)	$\frac{\theta}{\theta-1}$	$\frac{\theta}{(\theta-1)^2(\theta-2)}$	none