X	X Measures	$f(x)$	Values of X	$E(x)$	$V(x)$
Continuous uniform	Outcomes with equal density (continuous)	$\frac{1}{b-a}$	$a \le x \le b$	$\frac{b+a}{2}$	$\frac{(b-a)^2}{12}$
Exponential	Time between events; time until an event	$\lambda e^{-\lambda x}$	$x \ge 0$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$
Normal	Values with a bell-shaped distribution (continuous)	$\frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2}$	$-\infty < x < \infty$	μ	σ
Standard normal (Z)	Standard scores	$\frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}z^2}$	$Z = \frac{x-\mu}{\sigma}$	0	1
Binomial approximation	Number of successes in large number of trials	Approx. normal if $np \ge 5$ and $n(1-p) \ge 5$ by CLT	$Z = \frac{x-np}{\sqrt{np(1-p)}}$	np	$np(1-p)$
Poisson approximation	Number of occurrences in a fixed time period (large average)	Approx. normal if $\lambda > 30$	$z = \frac{x-\lambda}{\sqrt{\lambda}}$	λ	λ
$\bar{X}$	Average of $x_1, x_2, \ldots, x_n$	Exactly normal if x is normal. Approx. normal if $n \ge 30$ by CLT	$Z = \frac{\bar{x}-\mu_x}{\sigma_x/\sqrt{n}}$	μ_x	$\frac{\sigma_x^2}{n}$
$\hat{p}$	Proportion or percentage of successes in binomial with $np \ge 5$, $n(1-p) \ge 5$	Approx. normal if $np \ge 5$ and $n(1-p) \ge 5$ by CLT	$Z = \frac{\hat{p}-p}{\sqrt{\frac{p(1-p)}{n}}}$	p	$\frac{p(1-p)}{n}$