





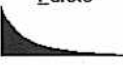


 <p>Exponential</p>	<ul style="list-style-type: none"> The distribution describes the time between occurrences Distribution is not affected by previous events 	Describes events that recur randomly.	Time between incoming phone calls, time between customer arrivals
 <p>Geometric</p>	<ul style="list-style-type: none"> Number of trials is not fixed Trials continue until the first success Probability of success is the same from trial to trial 	Describes the number of trials until the first successful occurrence.	Number of times you spin a roulette wheel before you win, how many wells to drill before you hit oil
 <p>Hypergeometric</p>	<ul style="list-style-type: none"> Total number of items (population) is fixed Sample size (number of trials) is a portion of the population Probability of success changes after each trial 	Describes the number of times an event occurs in a fixed number of trials, but trials are dependent on previous results.	Chance of a picked part being defective when selected from a box (without replacing picked parts to the box for the next trial)
 <p>Weibull</p>	This flexible distribution can assume the properties of other distributions. When shape parameters equal 1, it is identical to Exponential. When equal to 2, it is identical to the Rayleigh.	Fatigue and failure tests or other physical quantities.	Failure time in a reliability study, breaking strength of a material in a control test
 <p>Beta</p>	<ul style="list-style-type: none"> Range is between 0 and a positive value Shape can be specified with two positive values, alpha and beta 	Represents variability over a fixed range, describes empirical data.	Representing the reliability of a company's devices

 <p>Gamma</p>	<ul style="list-style-type: none"> The possible occurrences in any unit of measurement is not limited The occurrences are independent The average number of occurrences is constant from unit to unit 	Applied for physical quantities, such as the time between events when the event process is not completely random.	Demand for expected number of units sold during lead time, meteorological processes (pollutant concentrations)
 <p>Logistic</p>	Conditions and parameters are complex. See: Fishman, G. <i>Springer Series in Operations Research</i> . NY: Springer-Verlag, 1996.	Describes growth.	Growth of a population as a function of time, some chemical reactions
 <p>Pareto</p>	Conditions and parameters are complex. See: Fishman, G. <i>Springer Series in Operations Research</i> . NY: Springer-Verlag, 1996.	Analyzes other distributions associated with empirical phenomena.	Investigating distributions associated with city population sizes, size of companies, stock price fluctuations
 <p>Extreme Value</p>	Conditions and parameters are complex. See: Castillo, Enrique. <i>Extreme Value Theory in Engineering</i> . London: Academic Press, 1988.	Describes largest value of a response over time or the breaking strength of materials.	Largest flood flows, rainfall, and earthquakes, aircraft loads and tolerances
 <p>Neg. Binomial</p>	<ul style="list-style-type: none"> Number of trials is not fixed Trials continue to the rth success (trials never less than r) Probability of success is the same from trial to trial 	Models the distribution of the number of trials or failures until the r th successful occurrence.	Number of sales calls before you close 10 orders