

Experiment	Random Variable	Distribution
Rolling a die Flipping a coin Playing a series of games	Number of 'successes' sixes, heads, wins, etc., in a fixed # of trials.	Binomial
In general: Any independent sequence of 'trials' with only two possible outcomes (success and failure) whose probabilities don't change.	# of trials to get the first 'success'	Geometric
	# of trials to get the k^{th} success (2 nd six, 4 th head, 7 th win, etc.)	Negative Binomial
Drawing a certain # of marbles, dealing a card hand, etc. without replacement.	# of red marbles drawn, spades (aces) dealt, etc.	Hypergeometric
A specific 'incident' (one cannot call it 'event' - that name has other, technical meaning) such as: arrival of a customer or a phone call, catching a fish, etc. which happens randomly and repeatedly, at a given average rate.	# of arrivals (fishes caught, etc.) during a given time interval.	Poisson
	Time till the next arrival (catch, etc.) from any given moment (store opening, etc.), but also between any two consecutive arrivals.	Exponential
	Similarly, time till the k^{th} arrival (catch, etc.)	Gamma