Example: A fair die is tossed five times is succession. Each time the die is tossed, we observe if the top-side is a 'six' or not. We are to count the number of the five die-tosses that produced a top-side of six.

Solution:

Here is the probability distribution of the random variable X that counts, how many out of the five tosses, that produced a top-side of a six:

X	0	1	2	3	4	5
P(X = x)	0.4019	0.4019	0.16088	0.0322	0.0032	0.0001

Suppose we wished to find the probability of observing 3 or more sixes?

P(Event) = P(X >= 3) = P(X = 3) + P(X = 4) + P(X = 5)

= 0.0355

Now, in this instance, we are observing a certain type of random variable, one that counts 'how many times' something happens from 5 independent, 0-1 trials.