Law of Large Numbers

Example is a coin-toss:

X = the result of coin-toss. Heads = 1, Tails =0

¯ = the average of the tosses

n = number of times the coin is tossed, the sample

E = the expected value of X

‘when n→∞’ = as the value of n grows towards infinity

n is 100 coin tosses

heads came up 43 times

0.43 is the average

Expected value is 0.5, because the chances are 50/50

Summary:

The actual value of the observed tosses will converge toward the expected value of tosses the more times you make a toss.

Example:

10: 7/3 70%/30%

Ten tosses, seven heads, three tails

100: 52/48 52%/48%

One-hundred tosses, 52 heads, 48 tails

1000: 502/498 50.2%/49.8%

After a thousand tosses we get closer and closer to the 50%/50%