What’s a Random Walk?

The easiest way to think about it is to think about flipping a quarter over and over again. The number of heads minus the number of tails you’ve seen is your random walk!

Heads +1 Go up!
Tails -1 Go down!

There is a 100% chance you will have the same number of heads and tails at some point – a probability of 1. This means a random walk is recurrent. However, the average number of flips it will take is infinite!