

Abstract: In this paper, we cover some essential problems of (simple) random walks in one, two and three dimensions. At the beginning, we work only in one dimension. We find the probability of a position on a line at particular time. Then we study returns to origin and examine if return to origin is certain. Also, we look into a theorem called the arc sine law. Furthermore, we generalise some of those problems into two and three dimensions. We investigate a probability of a position in time and space and returns to origin.