1106-60-7 **Alan Krinik*** (ackrinik@csupomona.edu), California State Polytechnic Univ., Pomona, Department of Math & Stat, Pomona, CA 91768, and **Dmitry,Vladimir V. Kruchinin**. *Finding the probability of all Markov chain sample paths from j to k in n-steps where j,k > 0 that are bounded below by the x-axis and having transitions of size one or two (up or down).*

Using the reflection principle and generating function techniques, we develop formulas for the probability of various ballot box sample paths. We begin by deriving a formula for the probability of all sample paths (having n-steps) that travel from 0 to k (k, a natural number) with allowable transitions of 1, 2, -1 or -2 only and that are restricted to never touch nor cross the horizontal axis after leaving 0. We next determine the probability of all sample paths(again, only having allowable step size of: 1, 2, -1 or -2) that go from j to k (natural numbers) in n-steps without hitting or crossing the x-axis. (Received September 17, 2014)