

1125-VH-751 **Mark A. Krines*** (krinesm@ripon.edu). *The Reflection Principle and Bertrand's Ballot Theorem on Three Alternatives.*

Bertrand's Ballot Theorem concerns the probability that in a two-candidate election, the winning candidate is always ahead of the losing candidate during the counting of the votes. In this presentation, we consider this problem on three alternatives in answering two questions. One, what is the probability that the entire ranking of the three alternatives at the end of the election is maintained (including ties) throughout the counting of the ballots? Two, what is the probability that the winning alternative never trails either of the losing candidates throughout the counting of the ballots? Our methods for answering these questions are based in extending a version of the reflection principle that can be used to prove Bertrand's Ballot Theorem. (Received September 10, 2016)