

ELEMENTARY AND COMPOUND EVENTS PROBABILITY

William W.S. Chen
Department of Statistics
The George Washington University
Washington D.C. 20013
E-mail: williamwschen@gmail.com

ABSTRACT

The objective of this paper is to review some known elementary and compound events. We will review the sampling with and without replacement cases in order to see the effects on the probability. This will also change the weighting process in survey sampling. Finally, we will discuss two useful compound events, the Banach Matchbox Problem and the Poisson Negative Binomial Distribution in compound Events. These two distributions have been found useful in risk analysis. All theories are accompanied with examples to explain the meaning of these theories.

Mathematical Subject Classification: 62PXX

Some Key Words and Phrases:

Banach Matchbox Problem, Dependent and Independent Events,
Elementary and Compound Events, Empty Box, Find Empty Box,
Poisson Negative Binomial Distribution, Probability, With or Without Replacement.