

**Skewness Is a Friend:
Distribution-Free A Priori Precision for Mean, Skewness, and Higher Moments**

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Based on literatures pertaining to the a priori procedure (APP) and gain-probability (G-P) analyses, the present goal is to provide a direct linkage between them. The APP is a pre-data procedure for finding minimum sample sizes necessary for trustworthy estimates of population parameters. G-P analyses provide the extent to which one group has a probabilistic (dis)advantage over another group, and the extent of that (dis)advantage at varying magnitudes of intervals. However, as of now, there is no direct linkage between APP-based parameter estimation and

G-P-based probabilistic (dis)advantage. In addition, in both literatures, much of the work is under parametric settings. Our goal is to establish a direct linkage between the two literatures under nonparametric settings, with computer simulations and a free and user-friendly calculator.