

1067-J1-1993      **Marcus Pendergrass\*** (mpendergrass@hsc.edu), PO Box 174, Hampden-Sydney College, 1 College Road, Hampden-Sydney, VA 23943. *Bayesian Analysis of a Real Galton Board*. Preliminary report.

While it is common practice to use an ideal (or simulated) Galton board to illustrate the binomial distribution with  $p = 1/2$ , it is less common to subject data from a *real* Galton board to a statistical analysis to see whether the data actually come from a binomial distribution. We will present such an analysis, which was assigned as a project for a calculus-based statistics course. A Bayesian approach proves to be natural here, with a prior distribution that is binomial. Graphical, numerical, and algebraic perspectives all contribute to an understanding of this analysis. (Received September 22, 2010)