

A PROBABILITY ACTIVITY FOR BUSINESS STATISTICS CLASSES

Michael E. Ellis, University of Central Arkansas, 201 Donaghey Ave., Conway, AR 72035,
(501) 450-5322, mellis@uca.edu

Geoffrey Hill, University of Central Arkansas, 201 Donaghey Ave., Conway, AR 72035,
(501) 450-5347, ghill@uca.edu

Carla J. Barber, University of Central Arkansas, 201 Donaghey Ave., Conway, AR 72035,
(501) 450-5817, cjbarber@uca.edu

ABSTRACT

Probability concepts can be difficult for students in business statistics classes to grasp. One way to make concepts more accessible to freshman and sophomore students is through a hands-on activity. We present the details of such an activity involving tossing coins, rolling two dice, and recording the results. The activity gives the class the opportunity to explore several concepts from probability: trials, independence, binomial experiments, and discrete distributions with multiple outcomes. After the results have been shown to the class they can see examples of the law of large numbers plus the contrast between classical and empirical probability. It also provides a framework for a discussion of how to conduct experiments and gives students a concrete example of abstract probability concepts.