

Columbia University
Quiz 2 – Summer 2015
Intro to Stat
Instructor: Wei Wang

Student's name: _____

UNI: _____

Q.1) We have three types of coins, a) fair coins, b) unfair coins with probability .8 of getting a head, and c) unfair coins with probability of .2 of getting a head. We randomly select a coin, and assume that it could be of any of the three types with equal probabilities. Then we flip the coin 3 times, and observe 2 heads and 1 tail. What is the probability of observing this outcome (2 heads out of 3 tosses) if the coin is of type c? What is the marginal probability of observing this outcome? (Hint: Law of Total Probability)