

STAT 221 Introduction to Probability and Statistics Winter 2012

Quiz 11

Assigned on Mon Jan 30; due on Wed Feb 1. You may work with a group of as many as 4 students, submitting one quiz with all names, provided that you all contribute to the work. You may use your notes. Also, please include your section number (8am: section 2, 9am: section 3) and “quiz 11” along with your name.

Suppose that three executives (Arnold, Bruce, Crystal) drop their cell phones in an elevator. Each then picks up a cell phone at random.

1. List all outcomes in the sample space of this random process.
2. Report the probability that *all three* people pick up the correct phone.
3. Determine the probability that *at least one* person picks up the right phone.

According to the 2006 *Statistical Abstract of the United States*, 36.1% of American households have a pet dog and 31.6% have a pet cat.

4. Does it follow from this information that 67.7% have a pet dog *or* a pet cat?
5. Explain/justify your answer to #4 based on probability rules.