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.