

## Honors Statistics

### 3.5 WS #2

1. The probability that a person in the U.S. has type AB+ is 3%. Five unrelated people in the U.S. are selected at random. Find the probability that
  - a. all five have type AB+ blood
  - b. none of the five has type AB+ blood
  - c. at least one of the five has type AB+ blood
  
2. The probability that a person in the U.S. has type O+ blood is 38%. Three unrelated people in the U.S. are selected at random. Find the probability that
  - a. all three have type O+ blood
  - b. none of the three has type O+ blood
  - c. at least one of the three has type O+ blood
  
3. A multiple choice quiz has three questions, each with five answer choices. Only one of the choices is correct. You have no idea what the answer is to any question and have to guess each answer. Find the probability of answering
  - a. the first question correctly
  - b. the first two questions correctly
  - c. all three questions correctly
  - d. none of the questions correctly
  - e. at least one of the questions correctly
  
4. Approximately 70% of statistics students do their homework in time to be collected and graded. Four students are randomly selected. Find the probability that
  - a. all of them did their homework
  - b. none of them did their homework
  - c. at least one student did their homework
  - d. at least one student did not do their homework

## Answers

1a. .0000000243

1b. .859

1c. .141

2a. .0549

2b. .238

2c. .762

3a. .2

3b. .04

3c. .008

3d. .512

3e. .488

4a. .240

4b. .0081

4c. .992

4d. .760