Quiz 5
April 2, 2019

Instructions: Do all the problems on **both sides** of this paper. Show all your work.

1. [**4 points**] In order to gauge public opinion on the U.S. Congress' tax plan, a think tank surveyed 776 registered voters. They found that 55% of the respondents disapproved of the plan. What is the population and sample of this study? Identify the population parameter and statistic.

    - Population:_____

    - Sample:_____

    - Parameter:_____

    - Statistic:_____

2. [**10 points**] You want to determine the number of people that dine in the Arkansas Union each day. You try to determine this number by interviewing a sample.

    (a) Which of the following would most likely be a representative sample? (Circle one)
        i. Calling a random samplingof 100 phone numbers of U of A students.
        ii. The first 100 people that walk into the union today.
        iii. 100 U of A students that respond to your inquiry by email.
        iv. A list of 100 U of A students found from the Honors College webpage.

    (b) For each sample above you did not choose, explain why it's not a representative sample. (Write in complete sentences.)

        i. _____

        _____

        ii. _____

        _____

        iii. _____

        _____

        iv. _____

        _____

3. **[6 points]** A student wishes to determine how patriotic her fellow citizens are. She decides to survey passers by on Liberty Island (home to the Statue of Liberty) on July 4th. Based on her findings, her study concludes that Americans are extremely patriotic. Would you have a reason to question the results? Explain carefully. (Give as many reasons as possible.)