Stat 204
Quiz 2 1/28/20 Name: _____

1. 605 out of 1060 randomly selected teens aged 13 to 17 said that they had made a new friend online. Provide the relevant summary statistic using correct notation.

2. A Canadian longitudinal study examined whether giving antibiotics in infancy increased the likelihood of obesity later in life. Children were classified as having received antibiotics or not during the first year of life and as being overweight or not at 9 years old; the following table summarizes their findings:

	Overweight	Not overweight	Total
Antibiotics	144	294	
No antibiotics	37	141	
Total			

   (a) Fill in the missing totals; you should add 5 numbers to the table above.

   (b) What proportion of all children in the study received antibiotics during the first year of life?

   (c) What proportion of all children in the study were classified as overweight at age 9?

   (d) What proportion of those receiving antibiotics were classified as overweight at age 9? Call this $\hat{p}_A$.

   (e) What proportion of those not receiving antibiotics were classified as overweight at age 9? Call this $\hat{p}_N$.

   (f) What is $\hat{p}_A - \hat{p}_N$? What does this suggest?

3. The `Calories` column in the book's `NutritionStudy` dataset provides the daily calorie consumption for each subject in the study. Import this data into RStudio to answer the following questions.

   (a) What is the five-number summary of `Calories`?

   (b) What is the IQR of `Calories`?

   (c) What are the mean and standard deviation of `Calories`?

   (d) Which of the following is the most likely shape of the histogram of `Calories`? why?