**Part V: Chapter 5: Probabilities for Binomial Distributions**

**Task 1: The average obesity rate worldwide in 2014 was 13%. Open the full data set and sort the data by Obesity Rate. Use this sorted data set to determine the probability that a country in the dataset has an obesity rate greater than the worldwide rate.**

* **P(more than 13% obesity) =**
* **Examining the dataset, can you suggest a reason for the high proportion of countries in the dataset having an obesity rate above the worldwide average? State you reason(s) below:**
* **Suppose that fifteen countries are randomly selected to be included in a study of obesity. Determine if this group can be treated as a binomial distribution. State each requirement.**

**Task 2:**

* **Calculate the probability that 5 or fewer of the countries in the group of 15 has an obesity rate above the worldwide obesity rate average.**
* **Calculate the probability that more than 5 of the countries in the group of 15 has an obesity rate above the worldwide obesity rate average.**
* **What word describes the relationship between these probabilities?**

**Task 3: Would it be considered statistically unusual if more than 13 out of the 15 randomly selected counties had an obesity rate above the worldwide obesity rate average? Compute the probability and explain why.**

**Task 4: Would it be considered statistically unusual if exactly 3 out of the 15 randomly selected countries has an obesity rate above the worldwide obesity rate average? Compute the probability and explain why.**