**HW1: Descriptive Statistics—Percentages and Central Tendency**

1. A vaccine to prevent the flu was provided free of charge in a small community in a two-shot sequence over a 2-week period. Some people received both shots, some took only the first shot, others received neither. A survey of 1,000 residents taken the following spring provided these data:

|  |  |  |
| --- | --- | --- |
| Treatment | Got the Flu (# of persons) | Did Not Get the Flu (# of persons) |
| No Vaccine | 29 | 273 |
| One Shot | 9 | 91 |
| Two Shots | 14 | 586 |

1. Calculate descriptive statistics to describe the relationship between “Treatment” variable and whether the individual got the flu or not. (6 pts)
2. Describe the relationship between Treatment and whether an individual got the flu or not. (2 pts)
3. The following table shows the number of children in a sample of 30 randomly selected families in Nantou.

|  |  |
| --- | --- |
| Number of Children in the Family | Number of Families |
| 0 | 9 |
| 1 | 7 |
| 2 | 5 |
| 3 | 4 |
| 4 | 3 |
| 5 | 2 |

1. Calculate the mean number of children per family in this sample. (1 pt)
2. What is the median number of children per family? (1 pt)
3. What is the mode for the above distribution? (1 pt)
4. What is the statistical unit here? (1 pt)
5. What is the variable here? (1 pt)