# SOCI 33003: SOCIAL STATISTICS

# Summer I 2025

# Homework 2

(Due on June 6 (Friday), 2025 @ 12:00 pm)

**NAME:**

**STUDENT ID:**

**Question 1 (20 pts)**

Between Median and Mean, which one is more reliable measure in representing central tendency when the data has extreme outliers (either extremely high or low outliers), and why?

**Question 2 (30 pts)**

For the following raw data, please calculate its mode, median, mean, variance (S2), and st.d. (S)

|  |  |
| --- | --- |
| Case # | Age |
| 1 | 26 |
| 2 | 24 |
| 3 | 12 |
| 4 | 10 |
| 5 | 37 |
| 6 | 89 |
| 7 | 45 |
| 8 | 19 |
| 9 | 37 |
| 10 | 18 |
| 11 | 37 |

**Question 3 (30 pts)**

For the following data in frequency table, please calculate its mode, median, mean, variance (S2), and st.d. (S)

|  |  |  |
| --- | --- | --- |
| age | frequency | Cumulative frequency |
| 1 | 126 |  |
| 12 | 24 |  |
| 39 | 12 |  |
| 47 | 10 |  |
| 55 | 37 |  |
| 63 | 189 |  |
| 107 | 4 |  |
| N |  |  |

**Question 4 (20 pts)**

Please compute IQV for the following two cities in terms of their respective racial composition. Which city has more racial diversity and why?

|  |  |  |
| --- | --- | --- |
| Race | City F | City S |
| White | 76% | 42% |
| Black | 6% | 4% |
| Asian | 3% | 2% |
| Hispanic | 10% | 28% |
| Others | 5% | 24% |
| IQVs |  |  |