

- 1) For the following populations, please compute their IQV, and which population has more racial diversity, and why?

| Racial groups | Population A (in percentage) | Population B (in number) |
|---------------|------------------------------|--------------------------|
| White         | 70%                          | 68,598                   |
| Black         | 5%                           | 12,367                   |
| Hispanics     | 12%                          | 15,816                   |
| Asians        | 2%                           | 3,691                    |
| Others        | 11%                          | 9,864                    |
| N             | 100%                         | 110,336                  |
| IQV           | 60.1%                        | 71.4%                    |

- 2) For the following raw data, please compute its mode, median, mean, variance, and st.d.

15, 21, 41, 78, 12, 0, 0, 13, 0, 69, 108, 19

Mode: 0

Median: 17

Mean: 31.3

Variance ( $S^2$ ): 1,249.9

St.d. (S): 35.4

- 3) For the following frequency table, please compute its mode, median, mean, variance, and st.d.

| age | frequency | Cumulative frequency |
|-----|-----------|----------------------|
| 0   | 52        | 52                   |
| 15  | 36        | 52+36 = 88           |
| 21  | 12        | 88+12=100            |
| 29  | 47        | 100+47=147           |
| 38  | 10        | 147+10=157           |
| 55  | 34        | 157+34=191           |
| 57  | 59        | 191+59=250           |
| 62  | 67        | 250+67=317           |
| N   | 317       | ---                  |

Mode = 62

Median = 55

Mean = 37.6

Variance ( $S^2$ ) = 541.4

St.d. (S) = 23.3