

# Stat 2153 - Statistical Methods

## Quiz #2 - 2008.02.04

### Solutions

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The following is a list of scores from the first HW assignment, rounded to the nearest whole number.

Scores from first HW assignment									
95	70	85	95	80	100	95	100	95	85
100	95	100	100	95	95	100	90	80	95
100	78	74	70	87	83	100	100	100	83
100	100	87	100	100	91	91	100	100	91
96	100	60	92	92	76	96	100	88	100
100	56	92	96	100	96	76	76	100	92
88	92	100							

1. Compute the mean, median and mode of these scores.

There are 63 scores with  $\sum x = 5749$  which gives  $\mu \approx 91.2$ .

To calculate median and mode we sort the list:

Sorted scores from first HW assignment									
56	60	70	70	74	76	76	76	78	80
80	83	83	85	85	87	87	88	88	90
91	91	91	92	92	92	92	92	95	95
95	95	95	95	95	95	96	96	96	96
100	100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100	100
100	100	100							

The mode is clearly 100, and the median is 95.

2. From Quiz 1, you constructed a frequency distribution table that should have looked like the following:

Score	Frequency
50-59	1
60-69	1
70-79	7
80-89	10
90-99	21
100-109	23

Compute the mean using ONLY the above frequency distribution table.

The mean from the frequency distribution table is given by the following formula:

$$\bar{x} = \frac{54.5 \cdot 1 + 64.5 \cdot 1 + 74.5 \cdot 7 + 84.5 \cdot 10 + 94.5 \cdot 21 + 104.5 \cdot 23}{63} \approx 93.2$$