

Instructions: Show all work. Use exact answers, unless specifically asked to round.

1. Construct a stemplot of the data in the table below.

82	81	80	83	86	76	72	86	79	96
73	75	71	61	76	84	84	84	93	75
80	71	89	94	86	82	90	76	79	79
88	73	73	68	85	86	70	74	86	95
86	92	81	105	88	73	78	62	85	90

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6 | 1 2 8
7 | 0 1 1 2 3 3 3 3 4 5 5 6 6 6 8 9 9 9
8 | 0 0 1 1 2 2 3 4 4 4 5 5 6 6 6 6 6 8 8 9
9 | 0 0 2 3 4 5 6
10 | 5
  
```

2. If we wanted to graph the same data in a histogram with 6 classes, what should the class-width be?

$$\frac{105 - 61}{6} = 7.\bar{3} \quad \text{classwidth of } 7.5 - 8$$

3. Find the following based on the same data set above.
- Find the mean, median and the mode.

$$\text{mode} = 86 \quad \text{mean } \bar{x} = 81.22 \quad \text{med } \tilde{x} = 81.5$$

- Use technology to find the standard deviation.

$$s = 8.78$$

- Find the 5-number summary and draw a box plot.

$$\begin{aligned} \text{min} &= 61 \\ Q_1 &= 75 \\ \text{Med} &= 81.5 \\ Q_3 &= 86 \\ \text{max} &= 105 \end{aligned}$$