1. **Problem**
   From a very large population, a small sample of measurements was taken.

   | 93 | 95 | 92 | 95 | 96 |
   |----|----|----|----|----|

   Please calculate the average absolute deviation using the following formula:

   $$\text{AAD} = \frac{\sum |x - \bar{x}|}{n}$$

   **Solution**
   We fill out the table column by column.

   | $x$ | $x - \bar{x}$ | $|x - \bar{x}|$ |
   |-----|---------------|-----------------|
   | 93 | -1.2 | 1.2 |
   | 95 | 0.799999999999997 | 0.8 |
   | 92 | -2.2 | 2.2 |
   | 95 | 0.799999999999997 | 0.8 |
   | 96 | 1.8 | 1.8 |
   | ======== | ======== | ======== |
   | $\sum x = 471$ | | $\sum |x - \bar{x}| = 6.8$ |
   | $\bar{x} = 94.2$ | | |

   We are ready for the formula.

   $$s = \frac{\sum |x - \bar{x}|}{n}$$

   $$= \frac{6.8}{5}$$

   $$= \boxed{1.36}$$

2. **Problem**
From a very large population, a small sample of measurements was taken.

| 113 | 113 | 113 | 127 |

Please calculate the (Bessel corrected) sample standard deviation using the following formula:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

**Solution**
We fill out the table column by column.

| $x$ | $x - \bar{x}$ | $(x - \bar{x})^2$ |
| --- | --- | --- |
| 113 | -3.5 | 12.25 |
| 113 | -3.5 | 12.25 |
| 113 | -3.5 | 12.25 |
| 127 | 10.5 | 110.25 |
| ======== | ======== | ======== |
| $\sum x = 466$ | | $\sum(x - \bar{x})^2 = 147$ |
| $\bar{x} = 116.5$ | | |

We are ready for the formula.

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

$$= \sqrt{\frac{147}{4 - 1}}$$

$$= \sqrt{49}$$

$$= \boxed{7}$$