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

   | 70 | 36 | 59 | 50 | 28 |
   |----|----|----|----|----|

   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.

   | $x$ | $x - \bar{x}$ | $|x - \bar{x}|$ |
   |-----|---------------|------------------|
   | 70 | 21.4 | 21.4 |
   | 36 | -12.6 | 12.6 |
   | 59 | 10.4 | 10.4 |
   | 50 | 1.4 | 1.4 |
   | 28 | -20.6 | 20.6 |
   | ======== | ======== | ======== |
   | $\sum x = 243$ | | $\sum |x - \bar{x}| = 66.4$ |
   | $\bar{x} = 48.6$ | | |

   We are ready for the formula.

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

   $$= \frac{66.4}{5}$$

   $$= \boxed{13.28}$$

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

| 146 | 146 | 140 | 143 | 140 |

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.

| $x$ | $x - \bar{x}$ | $(x - \bar{x})^2$ |
|---|---|---|
| 146 | 3 | 9 |
| 146 | 3 | 9 |
| 140 | -3 | 9 |
| 143 | 0 | 0 |
| 140 | -3 | 9 |
| ======== | ======== | ======== |
| $\sum x = 715$ | | $\sum(x - \bar{x})^2 = 36$ |
| $\bar{x} = 143$ | | |

We are ready for the formula.

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

$$= \sqrt{\frac{36}{5 - 1}}$$

$$= \sqrt{9}$$

$$= \boxed{3}$$