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

187	190	179	183	190

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	$x - \bar{x}$	$\lvert x - \bar{x}\rvert$
187	1.19999999999999	1.2
190	4.19999999999999	4.2
179	-6.80000000000001	6.8
183	-2.80000000000001	2.8
190	4.19999999999999	4.2
========	========	========
$\sum x = 929$		$\sum \lvert x - \bar{x}\rvert = 19.2$
$\bar{x} = 185.8$		

We are ready for the formula.

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

$$= \frac{19.2}{5}$$

$$= \boxed{3.84}$$

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

108	102	102	102

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	$x - \bar{x}$	$(x - \bar{x})^2$
108	4.5	20.25
102	-1.5	2.25
102	-1.5	2.25
102	-1.5	2.25
========	========	========
$\sum x = 414$		$\sum (x - \bar{x})^2 = 27$
$\bar{x} = 103.5$		

We are ready for the formula.

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

$$= \sqrt{\frac{27}{4 - 1}}$$

$$= \sqrt{9}$$

$$= \boxed{3}$$