

## Question

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

201	204	199	205	196	198
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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} $
201	0.5	0.5
204	3.5	3.5
199	-1.5	1.5
205	4.5	4.5
196	-4.5	4.5
198	-2.5	2.5
=====	=====	=====
$\sum x = 1203$		$\sum  x - \bar{x}  = 17$
$\bar{x} = 200.5$		

We are ready for the formula.

$$\begin{aligned} s &= \frac{\sum |x - \bar{x}|}{n} \\ &= \frac{17}{6} \\ &= \boxed{2.8333333} \end{aligned}$$

## Meta-information

extype: num exsolution: 3.5071356 exname: calc sd