

To Estimate the accuracy and precision of an instrument that measures lengths, a 0.308 inch gauge block was used as a reference standard and was measured six times. The resulting measurements were: .309, .312, .313, .311, .307, and .310. Calculate estimates of both the accuracy and the precision of the measuring instrument.

ANSWER:

$$\bar{x} - x = 0.30130 - 0.308 = .0023, \text{ and } s = 0.0022 .$$

$$\| \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2}$$

↑
Sample mean, not True x.
