How to Calculate Standard Deviation

Formula:

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

Example:

$\bar{x}$ = mean = ⑧

n = sample size = ④

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sample size minus 1 = ⓝ – 1 = 3

$$S = \sqrt{\frac{1}{3}\sum_{i=1}^{4}(x_i - 8)^2}$$

$$S = \sqrt{\frac{(2-8)^2 + (8-8)^2 + (10-8)^2 + (12-8)^2}{3}}$$

$$S = \sqrt{\frac{36 + 0 + 4 + 16}{3}} = \sqrt{18.7} = 4.32$$