

Let $N = \{x_1, \dots, x_n\}$

where $x_{focal} = x_{\lceil \frac{n}{2} \rceil}$

$$\begin{aligned} s.t. \text{ Roughness}(N) &= \frac{1}{n} \sqrt{\sum_{i=1}^n (x_{focal} - x_i)^2} \\ &= SD_{focal}(N) \end{aligned}$$