

Extetion of Chebyshev's Inequality

When specific two progressions, a , and b , both of which have n elements, meet the following expressions,

$$\forall k \quad s.t. \quad 1 \leq k \leq n, \quad \prod_{i=1}^k a_i \geq \prod_{i=1}^k b_i$$

This formula will be held.

$$\forall k \quad s.t. \quad 1 \leq k \leq n, \quad \sum_{i=1}^k a_i - b_i \geq 0$$

To be proved.