7. Let n be a positive integer, $a_1, a_2, \ldots, a_n$ positive real numbers and $s = a_1 + a_2 + \cdots + a_n$. Prove that

$$\sum_{i=1}^{n} \frac{a_i}{s - a_i} \geq \frac{n}{n-1} \qquad \text{and} \qquad \sum_{i=1}^{n} \frac{s - a_i}{a_i} \geq n(n-1).$$