

Problems from N 1 – N 44

Problem 1

$$x(8\sqrt{1-x} + \sqrt{1+x}) \leq 11\sqrt{1+x} - 16\sqrt{1-x}; \quad x > 0$$

Solution. Let $y = \frac{\sqrt{1-x}}{\sqrt{1+x}}$

Problem 2

In a tetrahedron, the sums of opposite edges are equal. Prove that the sums of the opposite dihedral angles are equal.