ON THE CYCLIC HOMOGENEOUS POLYNOMIAL INEQUALITIES OF DEGREE FOUR OF THREE NONNEGATIVE REAL VARIABLES

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Abstract. Let \( f(x,y,z) \) is a cyclic homogeneous polynomial of degree four of three nonnegative real variables satisfying the condition \( f(1,1,1) = 0 \). We find necessary and sufficient condition to be true the inequality \( f(x,y,z) \geq 0 \), for this aim we introduce a characteristic polynomial \( J_f(t) \) and by its root \( t_0 > 0 \) we formulate the condition.


Keywords and phrases: Cyclic, homogeneous, polynomial, inequalities, degree four.

REFERENCES


