

Due on April 24, 2008

Sum of Two Integers

Suppose S is a set of distinct, positive integers less than or equal to n . Also suppose that there are at least $n/2 + 1$ elements in the set S . (S is a subset of $\{1, 2, 3, \dots, n\}$ and $|S| > n/2 + 1$.) Show that there must be at least three elements, a_i, a_j, a_k , in S , which satisfy $a_i + a_j = a_k$.