Problem 9. Prove that there is no sequence

\[ a_1, a_2, \ldots, a_{17} \]

of 17 real numbers such that the sum of any 7 consecutive numbers in the sequence is positive while the sum of any 11 consecutive numbers in the sequence is negative.

Prove, however, that there is such a sequence of 16 real numbers.

Solutions due by 10:00am Monday, October 27.