Zbl 216.32201
Erdős, Paul; Straus, E.G.
Some number theoretic results (In English)
Pac. J. Math. 36, 635-646 (1971). [0030-8730]

The paper consists of two disconnected parts. In the first part the authors investigate the maximal number $f(p)$ of residues mod p so that sums of different number of distinct elements of our set are distinct mod p. They prove

$$(4p)^{1/3} + o(p^{1/3}) < f(p) < (288p)^{1/3} + o(p^{1/3}).$$

It is conjectured that the lower bound gives the correct order of magnitude. In the second part they investigate the irrationality of series of the form

$$\sum_{n=1}^{\infty} \frac{u_n}{a_1, a_2 \dots a_n}, a_1 \leq a_2 \leq \dots .$$

Classification:
11J72 Irrationality
11B83 Special sequences of integers and polynomials
05D05 Extremal set theory