Sums of Polynomial Residues.

In an article in the Monthly from 1904, Orlando Stetson studied the sums of distinct residues of triangular numbers modulo a prime. Rather curiously, this sum is always the same residue class independent of the prime chosen. We extend Stetson’s theorem to all polygonal numbers and find similar phenomenon. Extensions to sums of residues of general polynomials will also be discussed. (Received September 17, 2016)