Lehner's 1949 results on the *j*-invariant showed high divisibility of the functions coefficients by the primes $p \in \{2, 3, 5, 7\}$. Expanding his results, we examine a canonical basis for the space of level p modular functions holomorphic at the cusp 0. We show that the Fourier coefficients of these functions are often highly divisible by these same primes.