

(MOCK) MODULAR FORMS MODULO 2 OR 3

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ABSTRACT. We prove that the coefficients of the mock theta functions

$$f(q) = \sum_{n=1}^{\infty} \frac{q^{n^2}}{(1+q)^2(1+q^2)^2 \cdots (1+q^n)^2}$$

possesses no linear congruences modulo 3. We prove similar results for the moduli 2 and 3 for a wide class of weakly holomorphic modular forms and discuss applications. This is joint work with S. Ahlgren.