

**University of Colorado**  
**Department of Mathematics**  
**Problem of the Month**  
**March 2014**

Let  $Q = \{2, 3, 4, 5, 7, 8, 9, 11, \dots\}$  be the set of prime powers. Find all polynomials  $f(x)$  with integer coefficients such that  $f(Q) \subseteq Q$ .