

Math 151

Spring 2004

Problem D (optional, for extra credit)

Last day to submit solutions: May 10, 2004

For which n , m , and k , is the function $f : \mathbb{Z}_n \rightarrow \mathbb{Z}_m$ given by $f([x]_n) = [kx]_m$

1. well-defined?
2. a ring homomorphism?