Exercise 1. Let $n \in \mathbb{N}$ and $e|n$. Prove that the function $f(d) = d/e$ gives a bijection from the set $\{d : e|d \text{ and } d|n\}$ to the set $\{k : k|n/e\}$.

Exercise 2. In Exercise 1 of Chapter 1 you showed that given a positive integer n, there are unique positive integers a and b, with b squarefree, so that $n = a^2 b$.

  a. Show that $k^2|n$ if and only if $k|a$.

  b. Show that $\mu^2(n) = I(a)$.

  c. Show that $\displaystyle\sum_{k^2|n} \mu(k) = \mu^2(n)$.