

**Exercise 1** (7(a)). Show that if two words  $w$  and  $v$  are Knuth equivalent, then removing the smallest  $k$  letters from each of  $w$  and  $v$  (with ties broken in order from left to right) results in two Knuth equivalent words  $w'$  and  $v'$ . (Hint: It suffices to show it for just one letter removed, and it also suffices to assume that  $w$  and  $v$  differ by an elementary Knuth move.)

Answer