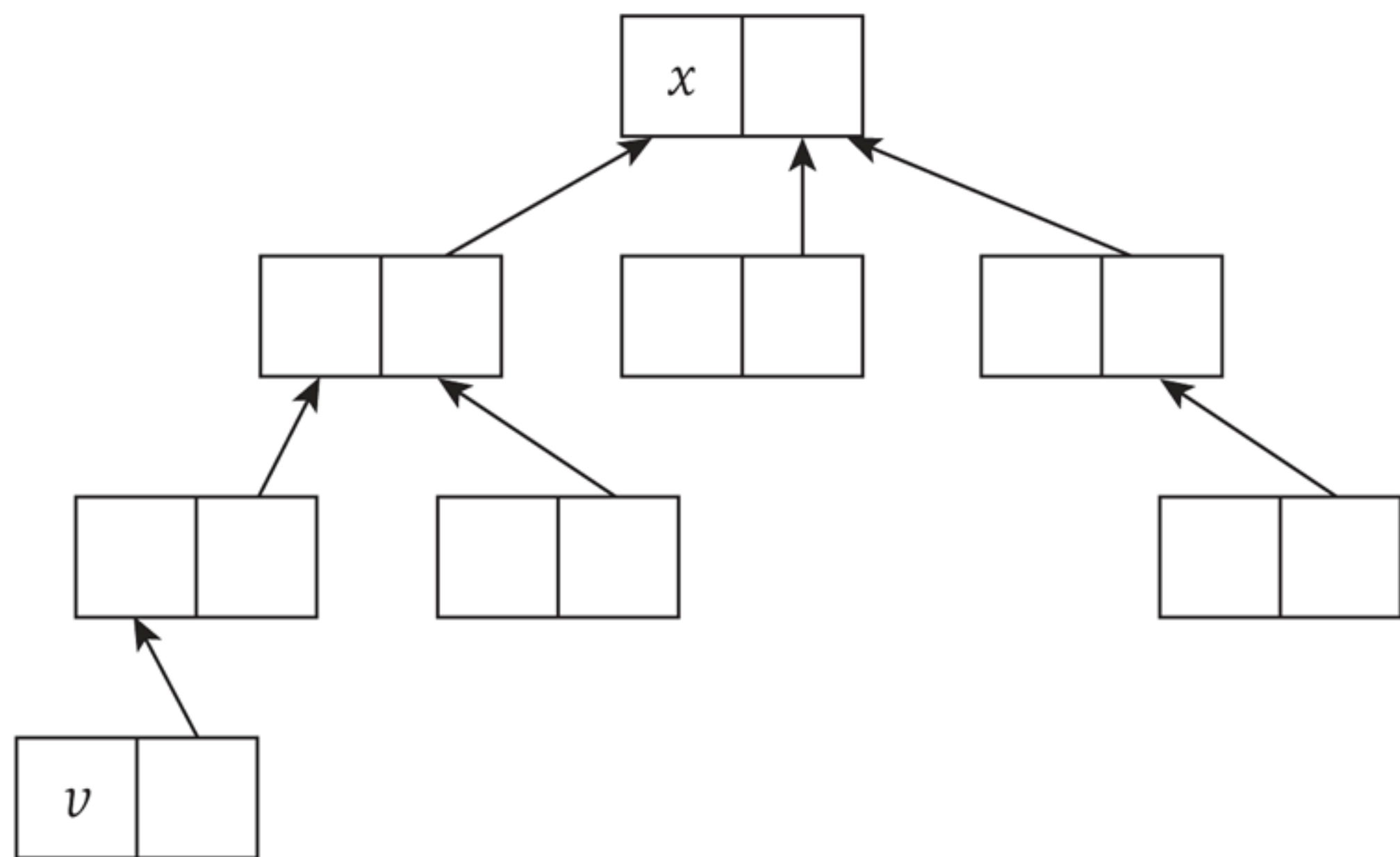
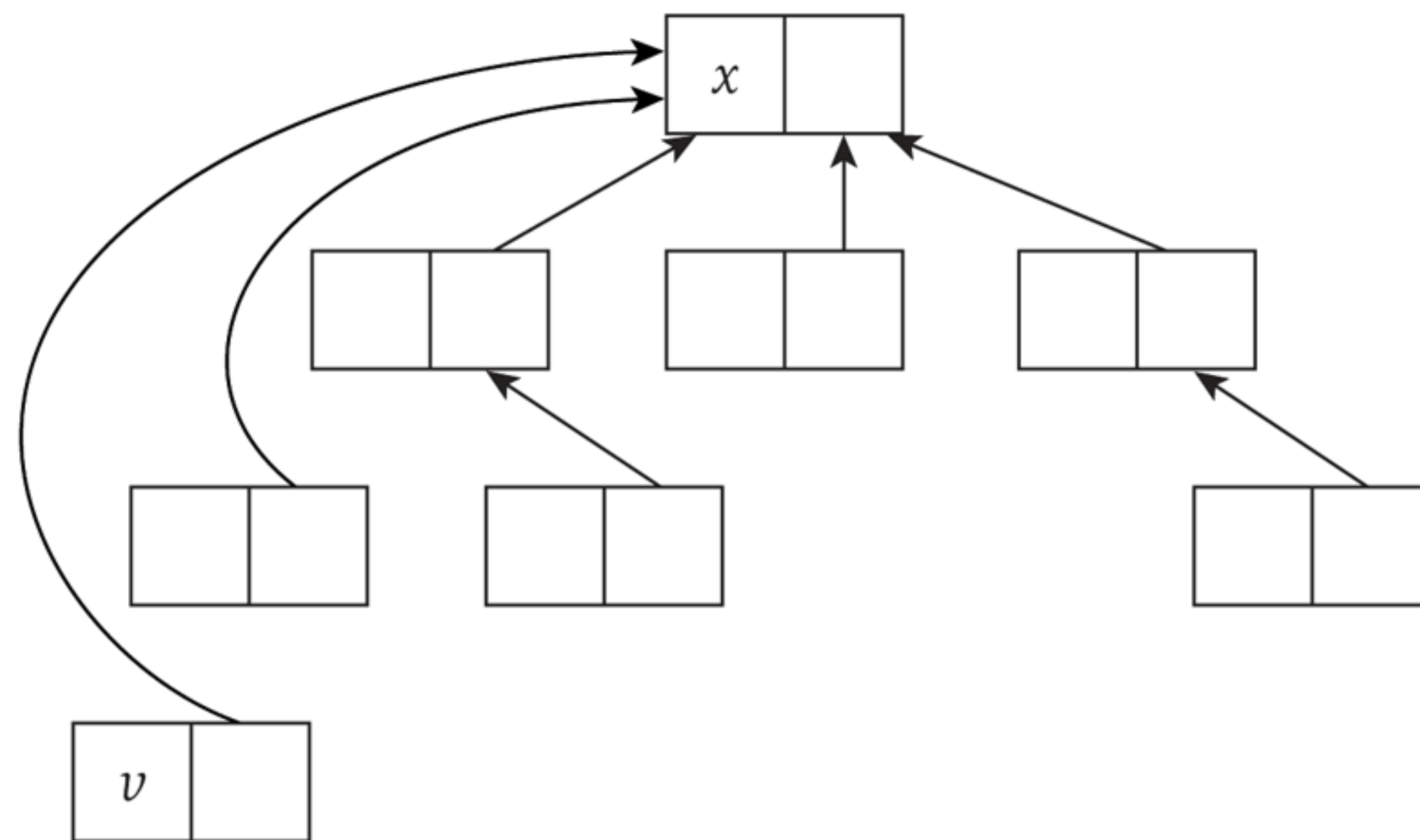


Everything on the path from  $v$  to  $x$   
now points directly to  $x$ .



(a)



(b)

**Figure 4.13** (a) An instance of a Union-Find data structure; and (b) the result of the operation  $\text{Find}(v)$  on this structure, using path compression.