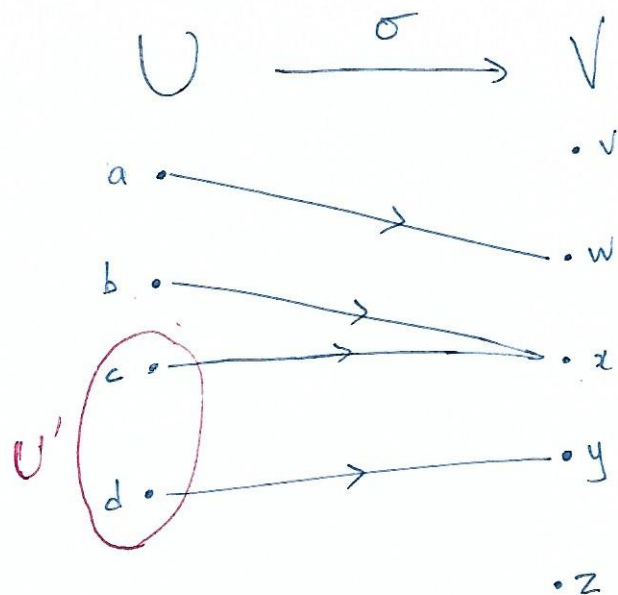
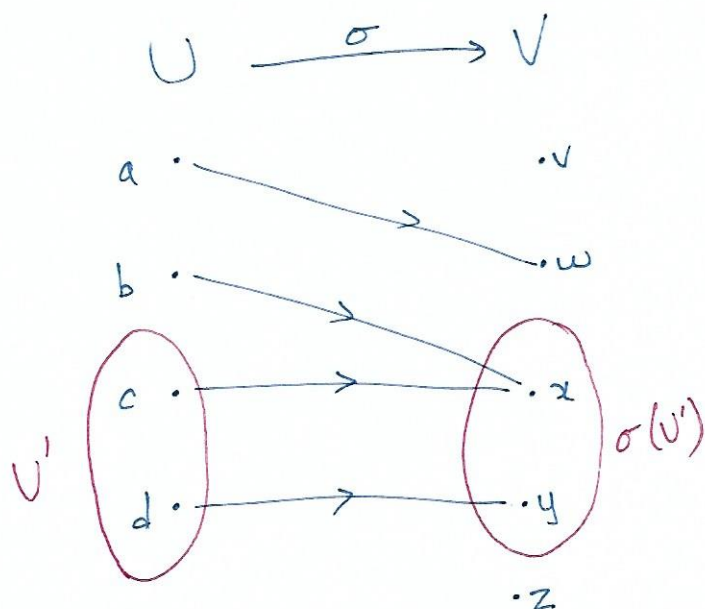


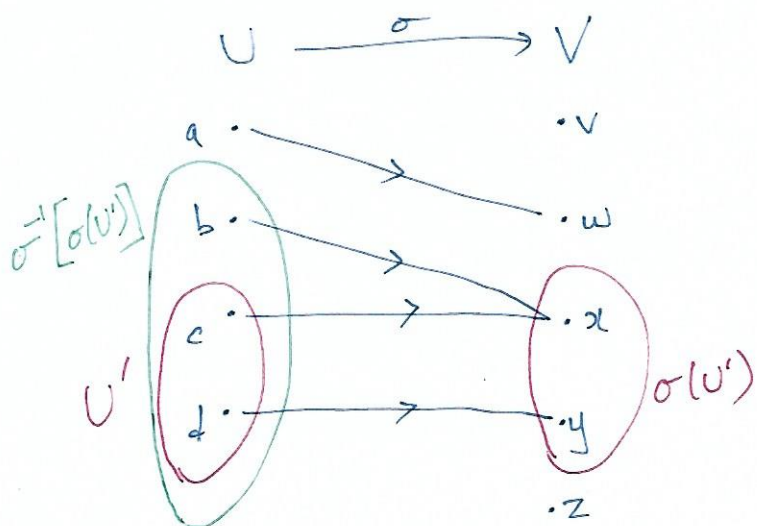
Example: let σ be the function in the picture below, let $U' = \{c, d\}$.



Follow the lines from left to right, starting inside U' , to find $\sigma(U')$:



Given any $V' \subseteq V$, we find $\sigma^{-1}[V']$ by following the lines from right to left. Let's do this for $V' = \sigma(U')$:



The green and red sets on the left hand side, in U , are different.

$$\sigma^{-1}[\sigma(U')] \neq U'$$