For nonempty sets A, B we say

$$|A| \leq |B| \text{ means there is a one-to-one function with domain } A, \text{ codomain } B$$
$$|A| \geq |B| \text{ means there is an onto function with domain } A, \text{ codomain } B$$
$$|A| = |B| \text{ means there is a bijection with domain } A, \text{ codomain } B$$

For all sets A, we say $|A| = |\emptyset|$, $|\emptyset| = |A|$ if and only if $A = \emptyset$.