Task 1. *Determine whether the given relation is an equivalence relation on the set:*

(a) nRm in R if $n \geq m$.

Solution. (a) This relation is not symmetric. For example, $2 \geq 1$, but $1 \ngeq 2$. Therefore, it cannot be an equivalence relation. By the way, this is an example of reflexive, transitive, but not symmetric relation. □