

Lecture #18: Introduction to Post's Problem

Lecture Presentation

Incomparable m -Degrees

Question: Do there exist m -degrees that are *incomparable*? That is, do there exist sets $S, T \subseteq \mathbb{N}$ such that $S \not\leq_m T$ and $T \not\leq_m S$?

Answer:

Proof:

Least Upper Bounds for m -Degrees

Question: For all sets $S, T \subseteq \mathbb{N}$ does there exist a set $U \subseteq \mathbb{N}$ such that $S \preceq_m U, T \preceq_m U$ and for all sets $V \subseteq \mathbb{N}$, if $S \preceq_m V$ and $T \preceq_m V$, then $U \preceq_Q V$ — so that the m -degree of U would serve as a kind of “least upper bound” for the m -degrees of S and T ?

Answer:

Proof:

