

0. Print your name:

1. Consider the mod 7 equivalence relation on the set of natural numbers. Find the equivalence class $[17]$ (i.e., give an implicit enumeration of the elements).

2. Let A be the set of all binary strings of length 3. Define a function $s : A \rightarrow N$ by $s(d_1d_2d_3) = d_1 + d_2 + d_3$ where $d_i \in \{0, 1\}$. Find the partition of A induced by the kernel relation of s .

3. Let W be the set of strings over $\{a, b, c\}$ and define a binary relation R on W by uRv means that either u is an initial segment of v or v is an initial segment of u . Prove or disprove: R is an equivalence relation.