CBSE QUESTIONS

1 Functions and Relations

1. Let A $= \{x \in Z : 0 \leq x \leq 12\}$. Show that R=$\{(a, b) : a, b \in A, \mid a - b \mid$ is divisible by 4$\}$ is an equivalence relation. Find the set of all elements related to 1. Also, write the equivalence class [2].

2. Show that the function f : $R \longrightarrow R$ defined by $f(x) = \frac{x}{x^2+1}, \forall x \in R$ is neither one-one nor onto.Also, if g :$R \longrightarrow R$ is defined as $g(x) = 2x - 1$, find $fog(x)$.