

Security - function - ii

Problem Statement

We now know the definition of functions.

If $f(x) = y$, such that $x \in X$ and $y \in Y$ then y is called an image of x and x is called the preimage of y .

Given $x_1, x_2 \in X$ and $y_1, y_2 \in Y$

$f(x_1) = y_1$ and $f(x_2) = y_2$

we call the function $f : X \rightarrow Y$ as 1-1 (one-to-one) iff

$$f(x_1) = f(x_2) \implies x_1 = x_2$$

Let us define one such one-to-one function $f_2 : X \rightarrow X$, such that $f_2(x) = x^2$

where $X = \{1, 2, 3, 4, \dots\}$ The function defined in the previous challenge is not one-to-one as

$$f_1(0) = f_1(11) = 0, 0 \neq 11$$

Your task is to complete the function which takes x as input and return x^2

Constraints

$$1 \leq x \leq 1000$$