2000 Paper 1 Question 1

Foundations of Computer Science

Code the curried function `exf`, which takes as arguments the function f and the list l. The result must consist of those elements x of l such that $f(x)$ is also a member of l. The elements of the result must be distinct from each other but may appear in any order. For example, if $f(x) = x + 1$ and $l = [9, 3, 2, 2, 8]$ then the result should be $[2, 8]$ or $[8, 2]$.   [9 marks]

State, with justification, the type of `exf`.   [1 mark]