Prolog for Artificial Intelligence

Consider the following Prolog program, which is intended to define the third argument to be the maximum value of the first two numeric arguments:

\[
\text{max}(X, Y, X) :- X \geq Y, !.
\]
\[
\text{max}(X, Y, Y).
\]

(a) Provide an appropriate query to show that the above program can give an incorrect result. [4 marks]

(b) Explain the cause of the error. [6 marks]

(c) Suggest a correction. [5 marks]

(d) Write a Prolog program to find the maximum of a list of numbers. [5 marks]