30.

Write a Prolog program to implement pattern matching

% Pattern Matching: match(Pattern, Input)

% Base case: empty pattern matches empty list

match([], []).

% Match constant head and recurse on tail

match([H|T1], [H|T2]) :-

match(T1, T2).

% Match variable in pattern to head of input list

match([Var|T1], [H|T2]) :-

var(Var), % Var must be a variable

Var = H, % Bind Var to H

match(T1, T2).

