

```
solve(X):-    solve(X,C,R),  
              (C==!,!,solve(R);true).
```

```
solve(true,_,_):-!.
```

```
solve(!,!,true):-!.
```

```
solve((A,B),X,Y):- !,solve(A,X,R),  
                  (X==!,!,Y=(R,B);  
                  solve(B,X,Y)).
```

```
solve((A;B),X,Y):- !,(solve(A,X,Y),  
                      (X==!,!;true);  
                      solve(B,X,Y)).
```

```
solve(A,_,_):-    system(A),!,  
                  call(A).
```

```
solve(A,_,_):-    clause(A,B),  
                  solve(B,X,R),  
                  (X==!,!,solve(R);true).
```

```
system(=(_,_)).
```

```
system(==(_,_)).
```

```
system(fail).
```

```
system(nl).
```

```
system(read(_)).
```

```
system(write(_)).
```

```
system(is(_,_)).
```

```
system(>(_,_)).
```

```
system(<(_,_)).
```

```
system(clause(_,_)).
```

```
system(call(_)).
```

```
system(var(_)).
```

```
vater(adam,abel).  
vater(adam,cain):-!.  
vater(abel,isaac).  
opa(X,Y):-!,vater(X,Z),vater(Z,Y).
```

```
a:-c.  
a:- !,fail.  
a:- b,!,c.  
a:-c.  
b.  
c.
```