

M-I-U System

Undefined terms - letters M, I, and U

Definition - x means any set of I's and U's

- Postulates -
- 1) If a string of letters ends in "I" you can add a "U" at the end
  - 2) If you have Mx, then you can add x to get Mxx.
  - 3) If 3 I's occur (III) then you may substitute U in their place.
  - 4) If UU occurs, you drop it.

The objective is: Given one statement, you are to derive or prove some other statement.

Example: Given: MI  
Prove: MIIU

	Statement	Reasons
1.	MI	Given
2.	MII	Rule 2
3.	MIIU	Rule 1

Prove the following theorems:

1. Given: MIII  
Prove: M

Statement	Reason

2. Given: MIIUUIIII  
Prove: MIIU

Statement	Reason

3. Given: MI  
Prove: MUI

Statement	Reason

4. Given: MI  
Prove: MIUIU

Statement	Reason

5. Given: MI  
Prove: MIIUIU

Statement	Reason

6. Given: MI  
Prove: MU

Statement	Reason