first-order logic   rules

universal elimination (∀E)

3. | ∀xPx
4. | Pa   : ∀E 3

Drop the ∀x and
replace the variable
with a name.

variables: u - z
names : a - t

existential introduction (∃I)

3. | Fa
4. | ∃xFx   : ∃I 3

Add an ∃x and
replace the name
with a variable.

universal introduction (∀I)

3. | Ga
4. | ∀x̄ Gx   : ∀I 3

Add an ∀x and
replace the name
with a variable.

And follow
this rule.

The name (on line 3) cannot
be in the premises.