- (D) (N) BA TX FE
 - (b) +x T(x) >> C(x)
 - Y x (T(x) V c(x)) => => => (Fr(x,y) / 7(Fx)
 - 7 3 x (T(x) A C(x) A F(x)) (g)
 - +x cm → (∃y fr(y,n) 1 c(y)) (e)
- (b) is ligitimate but not (a). In order to drup an existentiant quantifier at the romable 3 must be set to a constant this not used posentously.
 - (1) (a) No associations unifiers

 - (e) No unifler. & can not be black both y and father (1)
 - (d) [4/John, x/John]
- (2) (d) Resolution. Due part (00,16), (e) in a rest page.

7 Horse (x) V Africand (x) Horse (G1) 7 H

of Ansmal (y) V 7 Head (H, y) (b) barring (3/4)

-1 Head of (M, G) Head (H, G) False.



- 2(a) +x Horse (x) > Animal (x)
 - (b) 4xh Horse (x) ∧ Head of (h,x) => ∃y Animal (1) ∧ Head of (h,y)
 - (e) Premise. Horse (x) => Atmal(x) = 7 Horse (x) V Animal (x)
 Condusion

7 ($\forall x,h \text{ Horse}(x) \land \text{ HeadOf}(h,x) \Rightarrow \exists y \text{ Animal (3)} \land \text{ HeadOf}(h,3)$)
(Eliminate Smplicotion)

There (x) A Head of (h,x)) $V = \frac{1}{2} A + 1$ Animal (y) A Head of (h,y)) $V = \frac{1}{2} A + 1$ Take the sugation traids)

I x,h (Horse (x) A Head of (h,x)) A - (I y Arrivad (y) A Head of (h, y))

(1 = x p = +x - p, Take the regardon friside)

3 x, h. (Horse(x) 1 Head of (h, x)) 1 (4 y 7 Animal(x) V 7 Apred of (h, x))

(Drof quantifiers)

Horse (G) A head of (H, G) A (7 Animal (4) A Head of (H, 3))
House (G) A head of (H, G) A (7 Animal (4) A Head of (H, 3))

House (G) A head of (H, G) A (7 Animal (4) A Head of (H, 3))

so we have

m. 1. 7 Horse (x) V Animal (x)

- 2. Horse (9)
- 3. Head of (Hill)
 - 4. Amind (y) V THEOLOF (H, y)