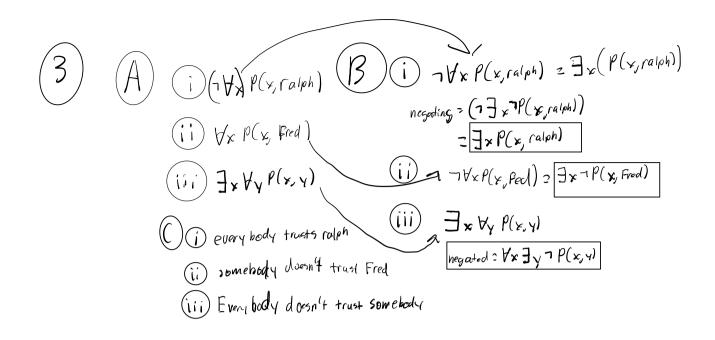


there exists positive integers that when squared are larger than 4. Also could be said numbers that are not less than or equal to 4 $\mu^{\lambda} 7 \mu = 4674$

Y! hooks by mork Twain

all of the students in the class $\forall_{x} P(x, H,F) = \text{have read Huck Finn}$

- $\exists_{x} \forall \forall \beta(x,y) = \text{there is a student in the class}$ who has read all of the books
 by Mark Twain
- all of the books by Mark Twain have been read by the class



valid

$$75 \vee 75 \rightarrow 61 M$$

$$M \rightarrow \rho$$

$$()(78) \vee (75) \rightarrow (6 \land m) \qquad hypoth$$

modus tollens

$$(5)$$
 $\neg (b \land m) \rightarrow , \neg (\neg s \lor \neg 5)$ contrapositive

-6)(7bv7m)-3(515)

double negation

7mv7b

(Gmmunity

(g) S/1 f

modus ponens

Q):, 5

Simplification

Bonus:

$$\exists x (A(x) \land \neg B(x))$$

 $\forall (A(x) \Rightarrow (x))$
 $\vdots \exists x (c(x) \land \neg B(x))$

$$(2) \forall (A(x) \Rightarrow (x))$$

$$3) A(m) \wedge \neg \beta(m)$$

$$\bigcirc$$
 (m)

hypothesis

existential instantion

Universal ivstart

simplification

 \checkmark

modus ponens of

addition ©, O

ex- generalization