FOL

language: const symbols, pred "", quantifiers ∀ ∃, →, ¬, ∧, ∨

interpretations: each interp corresponds to one tbl row.

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Consider a FOL with symbols P, a, b

Let I_1 be interp where D_1 is the people in the room, a^{I_1} is K, and b^{I_1} is me, and P will mean "is at least 10"

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Consider the wff

$P(a)$.

In I_1, $P(a)$ means

12 is at least 10.

$P(b)$, in I_1, means

I am at least 10

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We say $P(a)$ and $P(b)$ are true in I_1.

Also $\forall x\, P(x)$ is true in I_1, because we're all ≥ 10!

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Let I_2 have

D_2 = a kindergarten class

$= \{k_1, k_2, \ldots, t\}$ (a, b)

and P: ≥ 10 yo

$P(a)$: false in I_2

$P(b)$: true " "

$\forall x\, P(x)$: false in I_2

$\exists x\, P(x)$: true in I_2

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Language: a, b

P( )

Q(,)

I_3:

$D_3 = D_1$ = all of us

$P^{I_3} = P^{I_1}$ = "≥ 10"

$a^{I_3} = k$, $b^{I_3} = me$

$Q^{I_3}(x, y)$:

x older than y.

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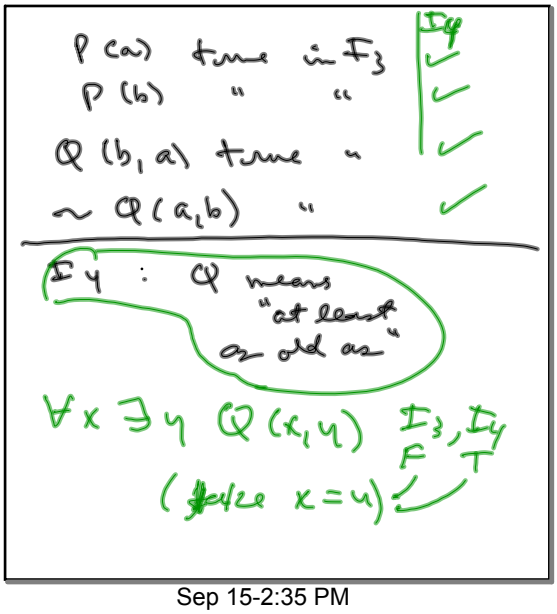

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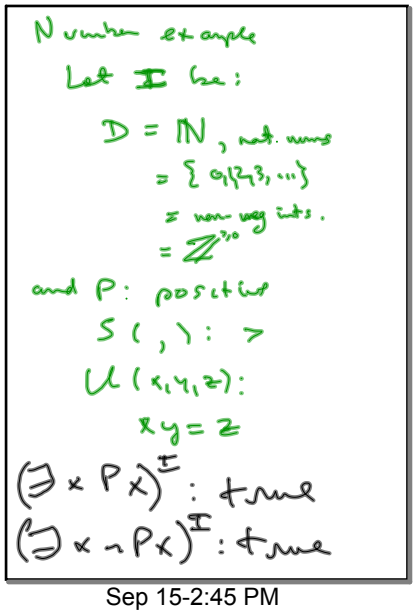

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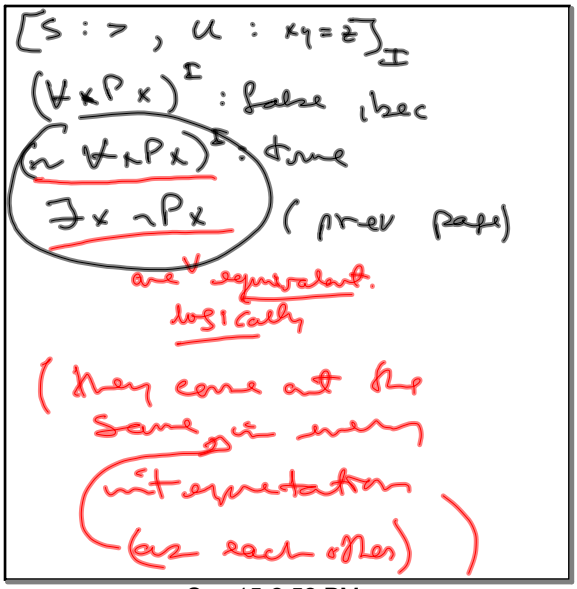

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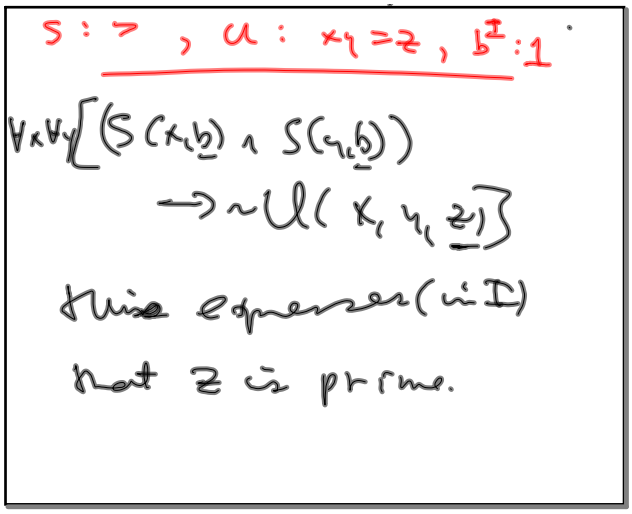

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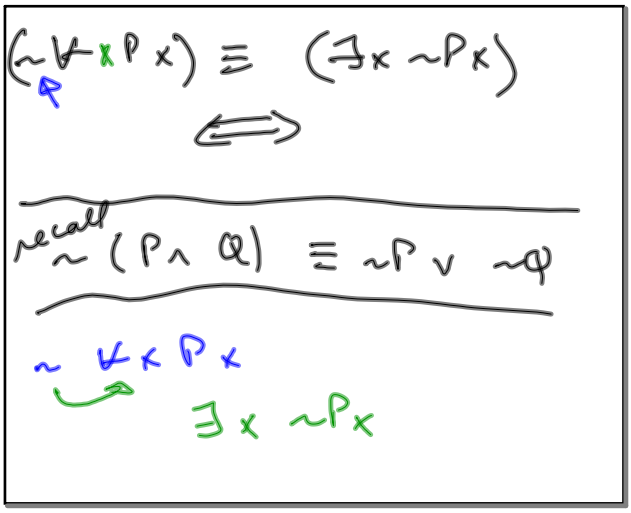

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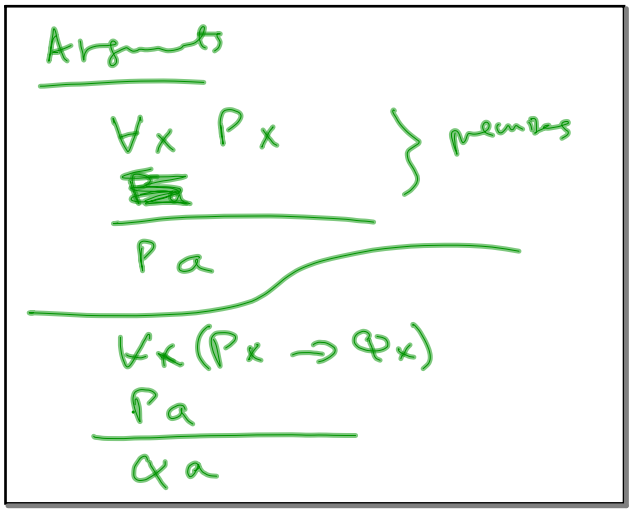

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