

```
lIA,  
breakatwhitespace=false,  
breaklines=true,  
captionpos=b,  
commentstyle=gray,  
deletekeywords=...,  
emphstyle=orange,  
escapeinside=/**),  
extendedchars=true,  
frame=none,  
keepspaces=true,  
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numberstyle=gray,  
rulecolor=black,  
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showstringspaces=false,  
showtabs=false,  
stepnumber=2,  
stringstyle=orange,  
tabsize=2,  
title=  
c.
```


$$\frac{\frac{F}{\overline{S}}F \approx SS}{(\vee D)\sigma L \vee C \neg L' \vee D \text{ where } L\sigma C\sigma \neg L'\sigma D\sigma\sigma = (L, L')}$$

$$\Box (L \vee C)\sigma(\neg L' \vee D)\sigma L \vee C \neg L' \vee D$$

$$(L \vee C) = L(\neg L' \vee D) = \neg L'\sigma = (L, L')$$

$$\vdash \Box [y \mapsto \neg(y)()](x) \vee \neg(y)\neg()_0 \bot = \{(\bot) \vee \neg(\bot), \neg(), ()\} * \textit{satisfiable} [x \mapsto]() \vee \neg(y)(x) \vee \neg(y))\neg()S_1 \bot \{\neg(), (), () \vee \neg(\bot)\}$$

[illegible]

$\{$
 $\neg((,)), (x,) =$
 $x\}^*$
unsatisfiable
 $S^\perp =$
 $\{(), \neg((,)), (\perp,) =$
 $\perp\}^*$
satisfiable
 \neq
 $y \vee$
 $\neg()$
 \vee
 $(y)^*$
,congruence
 \neq
 s
 $x \neq$
 $y \vee$
 $y =$
 $xs \neq$
 t
 $x \neq$
 $y \vee$
 $y \neq$
 $\hat{x} \vee$
 $\hat{x} =$
 $zs \neq$
 t
 $x_1 \neq$
 $y_1 \vee$
 $x_2 \neq$
 $y_2 \vee$
 $(x_1, x_2) = (y_1, y_2)(s_1, s_2) \neq$
 (t_1, t_2)
 $x \neq$
 $y \vee$
 $\neg(x) \vee$
 $(y)(s)$
 $x \neq$
 $y \vee$
 $\neg(x) \vee$
 $(y) \neg(s)$
Sym-
me-
try
re-
flex-
iv-
ity
con-
gru-
ence
 \neq
 $y \vee$
 $y =$
 $x[x_1 \mapsto x, x_2 \mapsto x, y_1 \mapsto y, y_2 \mapsto x]x \neq y \vee x \neq x \vee x \neq x \vee y = x[C]x_1 \neq y_1 \vee x_2 \neq y_2 \vee x_1 \neq x_2 \vee y_1 = y_2$
 \neq
 $y \vee$
 $y \neq$
 $\hat{x} \vee$
 $\hat{x} =$
 $z[x_1 \mapsto x, x_2 \mapsto y, y_1 \mapsto x, y_2 \mapsto z]x \neq x \vee y \neq z \vee x \neq y \vee x = z[C]x_1 \neq y_1 \vee x_2 \neq y_2 \vee x_1 \neq x_2 \vee y_1 = y_2$

$$\exists a_1 \ldots a_m \forall y_1 \ldots y_n F$$

$$F \neq$$

$$x^\vee \neq (,x)_\imath (y,)$$