$_{L}IA$,

```
breakatwhitespace=false,
breaklines=true,
captionpos=b,
commentstyle=gray,
deletekeywords=...,
emphstyle=orange,
escapeinside=%**),
extendedchars=true,
frame=none,
keepspaces=true,
keywordstyle=blue,
numbers=left,
numbersep=5pt,
numberstyle=gray,
rulecolor=black,
showspaces=false,
showstringspaces=false,
showtabs=false,
stepnumber=2,
stringstyle=orange,
tabsize=2,
title=
```

$\dot{F}$
$\bar{F}$
$\neg F \approx SS$
S

$$\frac{}{\vee D)\sigma A \vee C \neg B \vee D where A\sigma \mathcal{C}\sigma \neg B\sigma \mathcal{D}\sigma\sigma = (A, B)}$$

$[](A\vee)\sigma(\neg B\vee)\sigma A \vee \neg \vee D$

$(A\vee) = A(\neg B\vee) = \neg B\sigma = (A, B)$

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

$\{\}\exists\theta C\theta \subseteq D * C subsumes D S satisfiable \iff (S \setminus D) satisfiable \theta is proper, S\bot satisfiable \Longleftrightarrow (S \setminus D)\bot satisfiable \theta isr$

$\{\}\{\}\{\}\{\}\{\}\{\}\{\}11212{*}{*}{*}{*}\neg\neg((,z)) \mapsto \{.1..1.,.1..2.*\} \mapsto \{6\} \cap \{2,4,6\}$

$\ell_1((x,y)), \ell_2((x,())), \ell_3(((),))\ell_1 \mapsto ..*.*$
$\ell_2 \mapsto ..*..$
$\ell_3 \mapsto ....$

```
int32_t
yices_assert_formula(context_t
*ctx,
term_t
t);
term_t
yices_or(uint32_t
n,
term_t
arg[]);
term_t
yices_not(term_t
arg);
term_t
yices_eq(term_t
left,
term_t
right);
term_t
yices_application(term_t
fun,
uint32_t
n,
const
term_t
arg[]);
term_t
yices_new_uninterpreted_term(type_t
tau);
type_t
yices_function_type(uint32_t
n,
const
type_t
dom[],
type_t
range);
type_t
yices_bool_type(void);
type_t
yices_new_uninterpreted_type(void);
smt_status_t
yices_check_context(context_t
*ctx,
const
param_t
*params);
model_t
*yices_get_model(context_t
*ctx,
int32_t
keep_subst);
int32_t
yices_get_bool_value(model_t
*mdl,
term_t
t,
int32_t
```

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

$\ddot{\cdot}$o

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

F

$\neq$

$x \vee$

$(, x), (y,)$

`flex`

`bison`