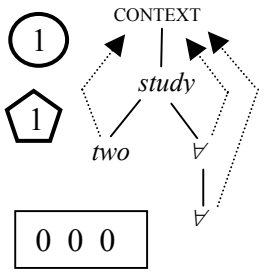
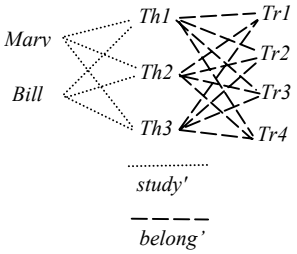
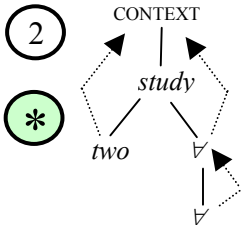
THE FIVE INTERPRETATIONS OF THE SENTENCE
Two students studied all theorems of all theories



There are two students (Mary and Bill) each of which studied all theorems that belong to all (relevant) theories (Tr1, Tr2, Tr3, Tr4).

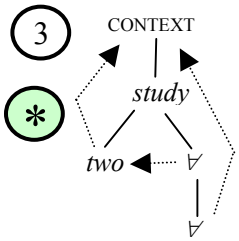
$\exists_{x1}\exists_{x2}$ [x1≠x2 ∧
$\forall_x$[(x = x1 ∨ x = x2) → student'(x)] ∧
$\forall_x$ [(x=x1 ∨ x=x2) →
$\forall_y$ [(theorem'(y) ∧
$\forall_z$ [theory'(z) → belong'(y, z)]) →
study'(x,y)]]





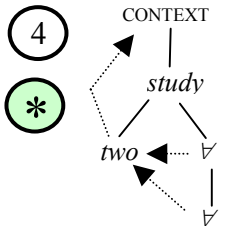
Conflates in 1.

0 0 01



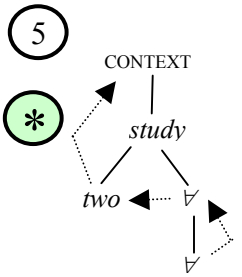
Conflates in 1.

0 00 0



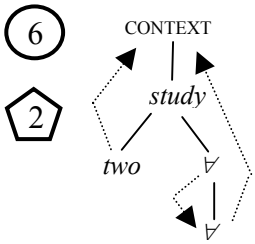
Conflates in 1.

0 00 00



Conflates in 1.

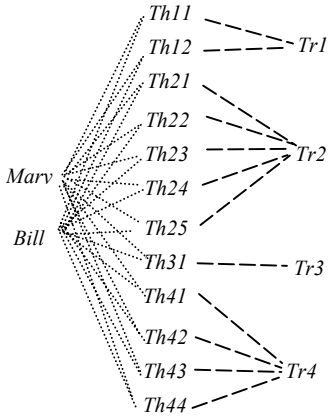
0 00 01

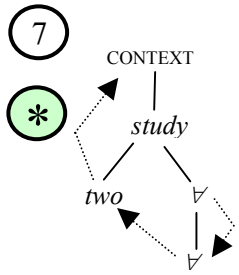


0 010 0

There are two students (Mary and Bill). Each student studies all theorems that belong to at least one of the (relevant) theories.

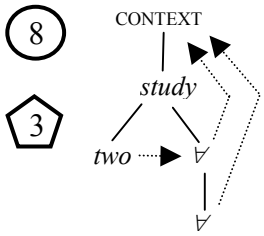
$\exists_{x1}\exists_{x2}$ [x1≠x2 ∧
$\forall_x$ [(x = x1 ∨ x = x2) → student'(x)] ∧
$\forall_z$ [theory'(z) →
$\forall_y$ [(theorem'(y) ∧ belong'(y,z)) →
$\forall_x$ [((x=x1 ∨ x= x2) → study'(x, y)]]]]





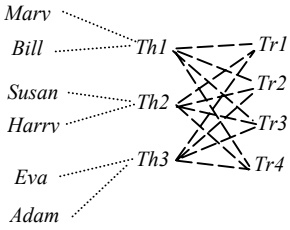
Conflates in 6.

0 010 00

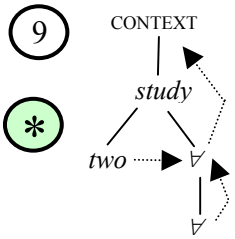


For each theorem that belongs to all of the (relevant) theories, there are two students, possibly different, who study it.

$\forall_y$ [(theorem'(y) ∧
$\forall_z$ [theory'(z) → belong'(y, z)]) →
$\exists_{x1}\exists_{x2}$ [x1≠x2 ∧
$\forall_x$ [(x = x1 ∨ x = x2) → student'(x)] ∧
$\forall_x$ [(x = x1 ∨ x = x2) → study'(x, y)]]]]

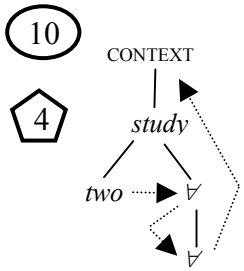


01 0 0



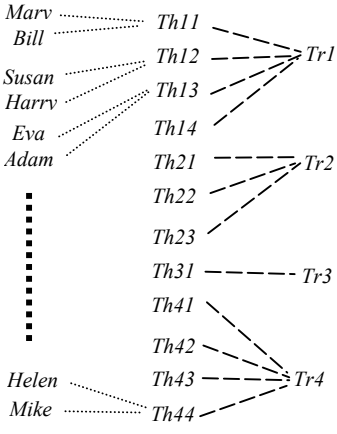
Conflates in 8.

01 0 01



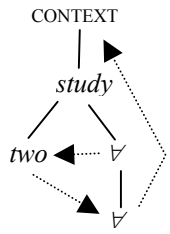
For all theorems that belong to any theory there are two, possibly different, students who study them.

$\forall_z$ [theory'(z) →
$\forall_y$ [(theorem'(y) ∧ belong'(y, z)) →
$\exists_{x1}\exists_{x2}$ [x1≠x2 ∧
$\forall_x$ [(x = x1 ∨ x = x2) → student'(x)] ∧
$\forall_x$ [(x = x1 ∨ x = x2) → study'(x, y)]]]]



01 010 0

11

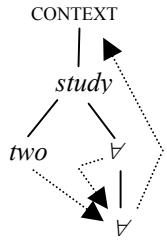


Conflates in 12.

010 00 0

12

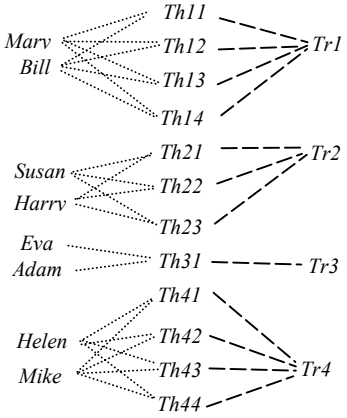
5



010 010 0

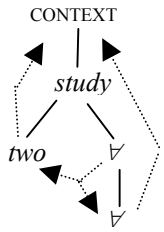
For each (relevant) theory there are two, possibly different, students (who chose them) who studied all theorems belonging to the theory s/he chose.

$\forall_z$ [theory'(z) →
$\exists_{x1}\exists_{x2}$ [x1≠x2 ∧
$\forall_x$ [(x = x1 ∨ x = x2) → student'(x)] ∧
$\forall_x \forall_y$ [((x = x1 ∨ x = x2) ∧
theorem'(y) ∧ belong'(y, z)) →
study'(x, y)]]]



13

*



010 00+010 0

Conflates in 6.