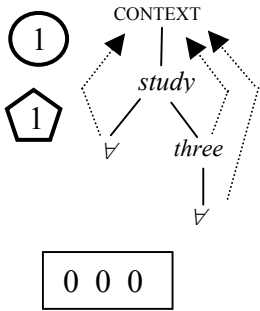


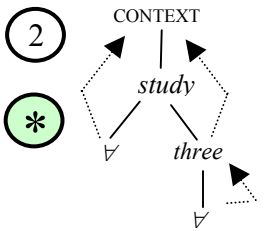
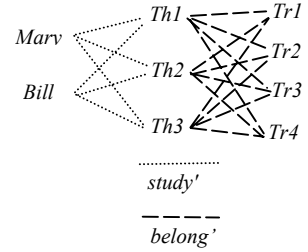
THE FOUR INTERPRETATIONS OF THE SENTENCE

All students studied three theorems of all theories



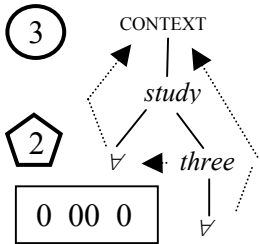
The two (relevant) students (Mary and Bill) studied the same three theorems that belong to all (relevant) theories (Tr1, Tr2, Tr3, Tr4).

$$\begin{aligned} &\exists y_1 \exists y_2 \exists y_3 [y_1 \neq y_2 \neq y_3 \wedge \\ &\forall_y \forall_z [((y=y_1 \vee y=y_2 \vee y=y_3) \wedge \text{theory}'(z)) \rightarrow \\ &\quad (\text{theorem}'(y) \wedge \text{belong}'(y, z))] \wedge \\ &\forall_x \forall_y [(\text{student}'(x) \wedge (y=y_1 \vee y=y_2 \vee y=y_3)) \rightarrow \\ &\quad \text{study}'(x, y)]] \end{aligned}$$



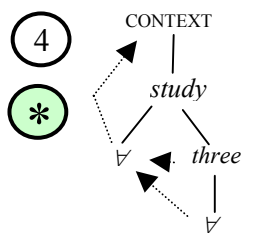
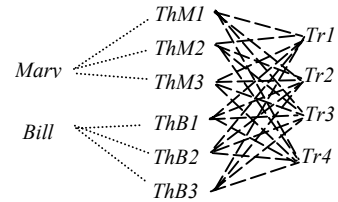
Conflates in 1.

0 0 01



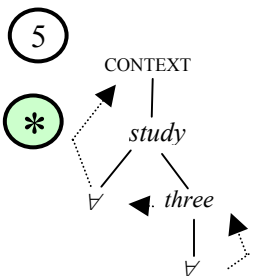
All (relevant) students (Mary and Bill) chose three theorems belonging to all (relevant) theories and studied them; they may choose different theorems.

$$\begin{aligned} &\forall_x [\text{student}'(x) \rightarrow \\ &\exists y_1 \exists y_2 \exists y_3 [y_1 \neq y_2 \neq y_3 \wedge \\ &\forall_y \forall_z [((y=y_1 \vee y=y_2 \vee y=y_3) \wedge \text{theory}'(z)) \rightarrow \\ &\quad (\text{theorem}'(y) \wedge \text{belong}'(y, z))] \wedge \\ &\forall_y [(y=y_1 \vee y=y_2 \vee y=y_3) \rightarrow \text{study}'(x, y)]]] \end{aligned}$$



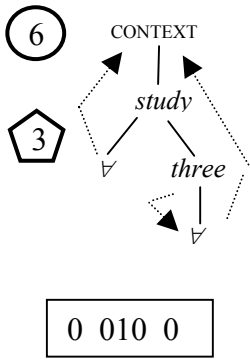
Conflates in 3.

0 00 00



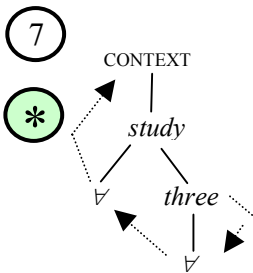
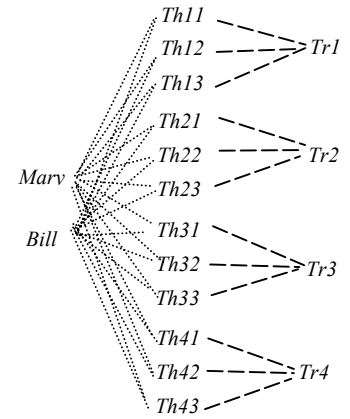
Conflates in 3.

0 00 01



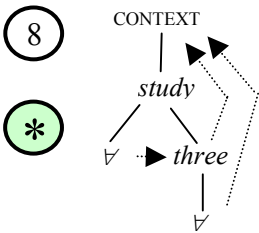
All (relevant) students (Mary and Bill) studied three theorems that belong to at least one of the (relevant) theories

$$\forall_z [\text{theory}'(z) \rightarrow \exists_{y_1} \exists_{y_2} \exists_{y_3} [y_1 \neq y_2 \neq y_3 \wedge \forall_y [(y=y_1 \vee y=y_2 \vee y=y_3) \rightarrow (\text{theorem}'(y) \wedge \text{belong}'(y, z))] \wedge \forall_x \forall_y [(\text{student}'(x) \wedge (y=y_1 \vee y=y_2 \vee y=y_3)) \rightarrow \text{study}'(x, y)]]]$$



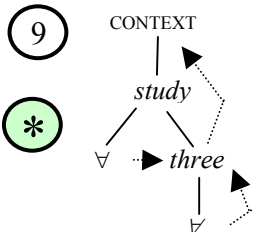
Conflates in 6.

$$0 \ 010 \ 00$$



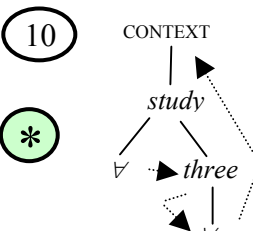
Conflates in 1.

$$01 \ 0 \ 0$$



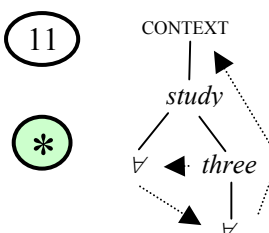
Conflates in 1.

$$01 \ 0 \ 01$$



Conflates in 6.

$$01 \ 010 \ 0$$

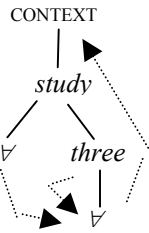


Conflates in 3.

$$010 \ 00 \ 0$$

12

*

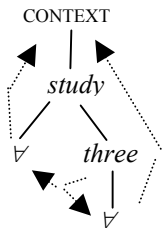


Conflates in 6.

010 010 0

13

4



All (relevant) students (Bill and Mary) choose three theorems from each of the (relevant) theories (Tr1, Tr2, Tr3, Tr4) and study them.

$$\forall_x \forall_z [(student'(x) \wedge theory'(z)) \rightarrow \exists_{y_1} \exists_{y_2} \exists_{y_3} [y_1 \neq y_2 \neq y_3 \wedge \forall_y [(y=y_1 \vee y=y_2 \vee y=y_3) \rightarrow (theorem'(y) \wedge belong'(y, z) \wedge study'(x, y))]]]$$

010 00+010 0

