

## t26\_parsp\_2

(TMFz4FoBj98VfsStG6EZ1uLp5tuAbyi6Mqb)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_parsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_parsp\_2 : \iota \Rightarrow o$  be given. Let  $l1\_parsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_parsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_parsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_parsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\
 & X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\
 & (u1\_struct\_0 X0)) \Rightarrow (\neg(\neg r1\_parsp\_2 X0 X1 X2 X3) \wedge ((r1\_parsp\_1 X0 \\
 & X1 X2 X3 X4) \wedge (r1\_parsp\_2 X0 X1 X2 X4))))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\
 & X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((\neg(X1 \neq X2) \wedge ((X2 \neq X3) \wedge (X3 \neq \\
 & X1))) \Rightarrow (r1\_parsp\_2 X0 X1 X2 X3)))))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\
 & X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_parsp\_2 X0 X1 X2 X3) \Rightarrow (( \\
 & r1\_parsp\_2 X0 X1 X3 X2) \wedge ((r1\_parsp\_2 X0 X3 X2 X1) \wedge ((r1\_parsp\_2 X0 \\
 & X2 X1 X3) \wedge ((r1\_parsp\_2 X0 X2 X3 X1) \wedge (r1\_parsp\_2 X0 X3 X1 X2)))))))))) \tag{3}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\
& X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r2\_parsp\_2 X0 X1 X2 X3 X4) \Leftrightarrow ((\neg r1\_parsp\_2 X0 \\
& X1 X2 X3) \wedge ((r1\_parsp\_1 X0 X1 X2 X3 X4) \wedge (r1\_parsp\_1 X0 X1 X3 X2 X4))))))) \\
& \hspace{15em} (4)
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_parsp\_1 X0) \wedge ((v1\_parsp\_2 \\
& X0) \wedge (l1\_parsp\_1 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r2\_parsp\_2 X0 X1 X2 X3 X4) \Rightarrow ((X1 \neq X2) \wedge ((X2 \neq \\
& X3) \wedge ((X3 \neq X1) \wedge ((X1 \neq X4) \wedge ((X2 \neq X4) \wedge (X3 \neq X4))))))))))
\end{aligned}$$