

# t12\_projdes1 (TMHpHsLobjjsUg- FcmB3SZBzTGnstKzdWgXLn)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_collsp : \iota \Rightarrow o$  be given. Let  $v3\_collsp : \iota \Rightarrow o$  be given. Let  $v4\_collsp : \iota \Rightarrow o$  be given. Let  $v2\_anproj\_2 : \iota \Rightarrow o$  be given. Let  $v3\_anproj\_2 : \iota \Rightarrow o$  be given. Let  $v7\_anproj\_2 : \iota \Rightarrow o$  be given. Let  $l1\_collsp : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_projdes1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_collsp X0) \wedge ((v3\_collsp X0) \wedge \\
& ((v4\_collsp X0) \wedge ((v2\_anproj\_2 X0) \wedge ((v3\_anproj\_2 X0) \wedge ((\neg v7\_anproj\_2 \\
& X0) \wedge (l1\_collsp X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r1\_projdes1 X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5. (m1\_subset\_1 \\
& X5 (u1\_struct\_0 X0)) \wedge ((r1\_collsp X0 X1 X2 X5) \wedge (r1\_collsp X0 X3 X4 \\
& X5)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_collsp X0) \wedge ((v3\_collsp X0) \wedge \\
& ((v4\_collsp X0) \wedge ((v2\_anproj\_2 X0) \wedge ((v3\_anproj\_2 X0) \wedge (l1\_collsp \\
& X0)))))) \Rightarrow ((v7\_anproj\_2 X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow (\exists X5. (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \wedge \\
& ((r1\_collsp X0 X1 X2 X5) \wedge (r1\_collsp X0 X3 X4 X5)))))))))
\end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_collsp X0) \wedge ((v3\_collsp X0) \wedge \\
& ((v4\_collsp X0) \wedge ((v2\_anproj\_2 X0) \wedge ((v3\_anproj\_2 X0) \wedge ((\neg v7\_anproj\_2 \\
& X0) \wedge (l1\_collsp X0)))))) \Rightarrow (\neg \forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow (r1\_projdes1 X0 X1 X2 X3 X4))))))
\end{aligned}$$