

# t9\_projpl\_1

(TMLn37ZFbxBixcv5uoqefvFE51BhXsYZKNP)

October 27, 2020

Let  $l1\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $u2\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $v6\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_incproj : \iota \Rightarrow o$  be given. Let  $v2\_incproj : \iota \Rightarrow o$  be given. Let  $v3\_incproj : \iota \Rightarrow o$  be given. Let  $v4\_incproj : \iota \Rightarrow o$  be given. Let  $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow ((v3\_incproj X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_incsp\_1 X0)) \Rightarrow (\exists X2.(m1\_subset\_1 X2 (u1\_incsp\_1 X0)) \wedge \\ & (\exists X3.(m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \wedge (\exists X4.(m1\_subset\_1 \\ & X4 (u1\_incsp\_1 X0)) \wedge ((X2 \neq X3) \wedge ((X3 \neq X4) \wedge ((X4 \neq X2) \wedge ((r1\_incsp\_1 \\ & X0 X2 X1) \wedge ((r1\_incsp\_1 X0 X3 X1) \wedge (r1\_incsp\_1 X0 X4 X1)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow ((v1\_incproj X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_incsp\_1 X0)) \Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 \\ & X4 (u2\_incsp\_1 X0)) \Rightarrow (\neg(r1\_incsp\_1 X0 X1 X3) \wedge ((r1\_incsp\_1 X0 X2 \\ & X3) \wedge ((r1\_incsp\_1 X0 X1 X4) \wedge ((r1\_incsp\_1 X0 X2 X4) \wedge ((X1 \neq X2) \wedge (X3 \neq \\ & X4)))))))))) \end{aligned} \quad (2)$$

## Theorem 1

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_incsp\_1 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u2\_incsp\_1 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \Rightarrow (\neg((v6\_incsp\_1 X0) \wedge ((v1\_incproj \\ & X0) \wedge ((v2\_incproj X0) \wedge ((v3\_incproj X0) \wedge ((v4\_incproj X0) \wedge (l1\_incsp\_1 \\ & X0)))))) \wedge ((X2 \neq X3) \wedge (\forall X4.(m1\_subset\_1 X4 (u1\_incsp\_1 X0)) \Rightarrow \\ & (\neg(r1\_incsp\_1 X0 X4 X2) \wedge ((\neg r1\_incsp\_1 X0 X4 X3) \wedge (X1 \neq X4)))))))))) \end{aligned}$$