

t16\_projpl\_1  
(TMc2wy8z6Xf9YjqcYqQJyVEwqLJFb2eavQB)

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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  $l1\_incsp\_1 : \iota \Rightarrow o$  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  $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_projpl\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r4\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u2\_incsp\_1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_incsp\_1 X0)) \Rightarrow (\forall X3. \\ & \quad (m1\_subset\_1 X3 (u1\_incsp\_1 X0)) \Rightarrow ((r4\_incsp\_1 X0 (k7\_domain\_1 \\ & \quad (u1\_incsp\_1 X0) X2 X3) X1) \Leftrightarrow ((r1\_incsp\_1 X0 X2 X1) \wedge (r1\_incsp\_1 X0 \\ & \quad X3 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v6\_incsp\_1 X0) \wedge ((v1\_incproj X0) \wedge ((v2\_incproj X0) \wedge \\ & \quad ((v3\_incproj X0) \wedge ((v4\_incproj X0) \wedge (l1\_incsp\_1 X0)))))) \Rightarrow (\forall X1. \\ & \quad (m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & \quad (u1\_incsp\_1 X0)) \Rightarrow ((X1 \neq X2) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 \\ & \quad X0)) \Rightarrow ((X3 = k1\_projpl\_1 X0 X1 X2) \Leftrightarrow (r4\_incsp\_1 X0 (k7\_domain\_1 ( \\ & \quad u1\_incsp\_1 X0) X1 X2) X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_incsp\_1 X0) \Rightarrow ((v6\_incsp\_1 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 \\ & \quad X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_incsp\_1 X0)) \Rightarrow \\ & \quad (\exists X3.(m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \wedge ((r1\_incsp\_1 X0 \\ & \quad X1 X3) \wedge (r1\_incsp\_1 X0 X2 X3)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v6\_incsp\_1 X0) \wedge ((v1\_incproj X0) \wedge ((v2\_incproj X0) \wedge \\ & ((v3\_incproj X0) \wedge ((v4\_incproj X0) \wedge (l1\_incsp\_1 X0)))))) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_incsp\_1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_incsp\_1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 X0)) \Rightarrow \\ & ((X1 \neq X2) \Rightarrow ((r1\_incsp\_1 X0 X1 (k1\_projpl\_1 X0 X1 X2)) \wedge ((r1\_incsp\_1 \\ & X0 X2 (k1\_projpl\_1 X0 X1 X2)) \wedge ((k1\_projpl\_1 X0 X1 X2 = k1\_projpl\_1 \\ & X0 X2 X1) \wedge ((r1\_incsp\_1 X0 X1 X3) \wedge (r1\_incsp\_1 X0 X2 X3)) \Rightarrow (X3 = k1\_projpl\_1 \\ & X0 X1 X2)))))))))) \end{aligned}$$