t24_projpl_1 (TM-LqLb8EtVB3m6NB6hGsp7BRkexRv2b2Zw3)

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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 $v5\_incproj : \iota \Rightarrow o$ 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 $k2\_projpl\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_projpl\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v6\_incsp\_1\ X0) \wedge ((v1\_incproj\ X0) \wedge ((v2\_incproj\ X0) \wedge ((v3\_incproj\ X0) \wedge ((v4\_incproj\ X0) \wedge ((v5\_incproj\ X0) \wedge (l1\_incsp\_1\ X0)))))))) \wedge ((m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)))) \Rightarrow (m1\_subset\_1\ (k2\_projpl\_1\ X0\ X1\ X2)\ (u1\_incsp\_1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.((v6\_incsp\_1\ X0) \wedge ((v1\_incproj\ X0) \wedge ((v2\_incproj\ X0) \wedge ((v3\_incproj\ X0) \wedge ((v4\_incproj\ X0) \wedge ((v5\_incproj\ X0) \wedge (l1\_incsp\_1\ X0)))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)) \Rightarrow ((X1 \neq X2) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0)) \Rightarrow ((X3 = k2\_projpl\_1\ X0\ X1\ X2) \Leftrightarrow (r2\_projpl\_1\ X0\ X3\ X1\ X2)))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0)) \Rightarrow ((r2\_projpl\_1\ X0\ X1\ X2\ X3) \Leftrightarrow ((r1\_incsp\_1\ X0\ X1\ X2) \wedge (r1\_incsp\_1\ X0\ X1\ X3)))))) \tag{3}$$

Theorem 1

$$\forall X0.((v6\_incsp\_1\ X0)\wedge((v1\_incproj\ X0)\wedge((v2\_incproj\ X0)\wedge((v3\_incproj\ X0)\wedge((v4\_incproj\ X0)\wedge((v5\_incproj\ X0)\wedge(l1\_incsp\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0))\Rightarrow((X2\neq X3)\Rightarrow((r1\_incsp\_1\ X0\ (k2\_projpl\_1\ X0\ X2\ X3)\ X2)\wedge((r1\_incsp\_1\ X0\ (k2\_projpl\_1\ X0\ X2\ X3)\ X3)\wedge((k2\_projpl\_1\ X0\ X2\ X3 = k2\_projpl\_1\ X0\ X3\ X2)\wedge(((r1\_incsp\_1\ X0\ X1\ X2)\wedge(r1\_incsp\_1\ X0\ X1\ X3))\Rightarrow(X1 = k2\_projpl\_1\ X0\ X2\ X3)))))))))$$