t1_projpl_1 (TMWBWjFdb-dzjfQMvWp2Cieq4oRwMdpfX3YK)

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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 $r4\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_projpl\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_projpl\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_incsp\_1\ X0)) \Rightarrow ((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X3\ X4)\ X1) \Leftrightarrow ((r1\_incsp\_1\ X0\ X2\ X1) \wedge ((r1\_incsp\_1\ X0\ X3\ X1) \wedge (r1\_incsp\_1\ X0\ X4\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0)) \Rightarrow ((r4\_incsp\_1\ X0\ (k7\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X3)\ X1) \Leftrightarrow ((r1\_incsp\_1\ X0\ X2\ X1) \wedge (r1\_incsp\_1\ X0\ X3\ X1)))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ X0)) \Rightarrow ((r3\_projpl\_1\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow ((r1\_incsp\_1\ X0\ X1\ X2) \wedge ((r1\_incsp\_1\ X0\ X1\ X3) \wedge (r1\_incsp\_1\ X0\ X1\ X4)))))))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_incsp\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0))\Rightarrow((r2\_projpl\_1\ X0\ X1\ X2\ X3)\Leftrightarrow((r1\_incsp\_1\ X0\ X1\ X2)\wedge(r1\_incsp\_1\ X0\ X1\ X3))))))) \tag{4}$$

Theorem 1

$$\forall X0.(l1\_incsp\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u2\_incsp\_1\ X0))\Rightarrow(((r4\_incsp\_1\ X0\ (k7\_domain\_1\ (u1\_incsp\_1\ X0)\ X1\ X2)\ X4)\Rightarrow(r4\_incsp\_1\ X0\ (k7\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X1)\ X4))\wedge(((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X1\ X2\ X3)\ X4)\Rightarrow((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X1\ X3\ X2)\ X4)\wedge((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X1\ X3)\ X4)\wedge((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X2\ X3\ X1)\ X4)\wedge((r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X3\ X1\ X2)\ X4)\wedge(r4\_incsp\_1\ X0\ (k8\_domain\_1\ (u1\_incsp\_1\ X0)\ X3\ X2\ X1)\ X4))))))\wedge(((r2\_projpl\_1\ X0\ X1\ X4\ X5)\Rightarrow(r2\_projpl\_1\ X0\ X1\ X5\ X4))\wedge((r3\_projpl\_1\ X0\ X1\ X4\ X5\ X6)\Rightarrow((r3\_projpl\_1\ X0\ X1\ X4\ X6\ X5)\wedge((r3\_projpl\_1\ X0\ X1\ X5\ X4\ X6)\wedge((r3\_projpl\_1\ X0\ X1\ X5\ X6\ X4)\wedge((r3\_projpl\_1\ X0\ X1\ X6\ X4\ X5)\wedge(r3\_projpl\_1\ X0\ X1\ X6\ X5\ X4))))))))))))))$$