t21_projred2 (TMP1TsRN5g2KjgmQKf8tQe4WB28GjasjgK4)

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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 $v9\_incproj : \iota \Rightarrow o$ 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 $r1\_projred2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_projred1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v6\_incsp\_1\ X0) \wedge ((v1\_incproj\ X0) \wedge ((v2\_incproj\ X0) \wedge ((v3\_incproj\ X0) \wedge ((v4\_incproj\ X0) \wedge ((v5\_incproj\ X0) \wedge ((v9\_incproj\ X0) \wedge (l1\_incsp\_1\ X0)))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0)) \Rightarrow (\neg(\neg r1\_incsp\_1\ X0\ X1\ X2) \wedge ((\neg r1\_incsp\_1\ X0\ X1\ X3) \wedge (k2\_funct\_1\ (k1\_projred1\ X0\ X2\ X3\ X1) \neq k1\_projred1\ X0\ X3\ X2\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v6\_incsp\_1\ X0) \wedge ((v1\_incproj\ X0) \wedge ((v2\_incproj\ X0) \wedge ((v3\_incproj\ X0) \wedge ((v4\_incproj\ X0) \wedge ((v5\_incproj\ X0) \wedge ((v9\_incproj\ X0) \wedge (l1\_incsp\_1\ X0)))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0)) \Rightarrow (\neg(\neg r1\_incsp\_1\ X0\ X1\ X2) \wedge ((\neg r1\_incsp\_1\ X0\ X1\ X3) \wedge (\neg v2\_funct\_1\ (k1\_projred1\ X0\ X2\ X3\ X1))))))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (((v2\_funct\_1\ X0) \wedge (v2\_funct\_1\ X1)) \Rightarrow (k2\_funct\_1\ (k3\_relat\_1\ X0\ X1) = k3\_relat\_1\ (k2\_funct\_1\ X1)\ (k2\_funct\_1\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.((v6\_incsp\_1\ X0)\wedge((v1\_incproj\ X0)\wedge((v2\_incproj\ X0)\wedge((v3\_incproj\ X0)\wedge((v4\_incproj\ X0)\wedge((v5\_incproj\ X0)\wedge((v9\_incproj\ X0)\wedge(l1\_incsp\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ (u2\_incsp\_1\ X0))\Rightarrow(\neg(\neg r1\_incsp\_1\ X0\ X1\ X3)\wedge((\neg r1\_incsp\_1\ X0\ X2\ X4)\wedge((\neg r1\_incsp\_1\ X0\ X1\ X5)\wedge((\neg r1\_incsp\_1\ X0\ X2\ X5)\wedge((\neg r1\_projred2\ X0\ X3\ X4\ X5)\wedge((r1\_projred2\ X0\ X3\ X5\ X6)\wedge((\neg r1\_incsp\_1\ X0\ X2\ X6)\wedge((X3\neq X6)\wedge((X1\neq X2)\wedge((r1\_incsp\_1\ X0\ X1\ X7)\wedge((r1\_incsp\_1\ X0\ X2\ X7)\wedge(\forall X8.(m1\_subset\_1\ X8\ (u1\_incsp\_1\ X0))\Rightarrow(\neg(r1\_incsp\_1\ X0\ X8\ X7)\wedge((\neg r1\_incsp\_1\ X0\ X8\ X3)\wedge((\neg r1\_incsp\_1\ X0\ X8\ X6)\wedge(k3\_relat\_1\ (k1\_projred1\ X0\ X3\ X5\ X1)\ (k1\_projred1\ X0\ X5\ X4\ X2) = k3\_relat\_1\ (k1\_projred1\ X0\ X3\ X6\ X8)\ (k1\_projred1\ X0\ X6\ X4\ X2))))))))))))))))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v6\_incsp\_1\ X0)\wedge((v1\_incproj\ X0)\wedge((v2\_incproj\ X0)\wedge((v3\_incproj\ X0)\wedge((v4\_incproj\ X0)\wedge((v5\_incproj\ X0)\wedge((v9\_incproj\ X0)\wedge(l1\_incsp\_1\ X0)))))))\wedge((m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0))\wedge((m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\wedge(m1\_subset\_1\ X3\ (u1\_incsp\_1\ X0)))))\Rightarrow((v1\_funct\_1\ (k1\_projred1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k1\_projred1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_incsp\_1\ X0)\ (u1\_incsp\_1\ X0)))))) \tag{5}$$

Assume the following.

$$\forall X0.((v6\_incsp\_1\ X0)\wedge((v1\_incproj\ X0)\wedge((v2\_incproj\ X0)\wedge((v3\_incproj\ X0)\wedge((v4\_incproj\ X0)\wedge(l1\_incsp\_1\ X0))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0))\Rightarrow((r1\_projred2\ X0\ X1\ X2\ X3)\Leftrightarrow(\exists X4.(m1\_subset\_1\ X4\ (u1\_incsp\_1\ X0))\wedge((r1\_incsp\_1\ X0\ X4\ X1)\wedge((r1\_incsp\_1\ X0\ X4\ X2)\wedge(r1\_incsp\_1\ X0\ X4\ X3)))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{7}$$

Theorem 1

$$\forall X0.((v6\_incsp\_1\ X0)\wedge((v1\_incproj\ X0)\wedge((v2\_incproj\ X0)\wedge((v3\_incproj\ X0)\wedge((v4\_incproj\ X0)\wedge((v5\_incproj\ X0)\wedge((v9\_incproj\ X0)\wedge(l1\_incsp\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_incsp\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u2\_incsp\_1\ X0))\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ (u2\_incsp\_1\ X0))\Rightarrow(\neg(\neg r1\_incsp\_1\ X0\ X1\ X3)\wedge((\neg r1\_incsp\_1\ X0\ X2\ X4)\wedge((\neg r1\_incsp\_1\ X0\ X1\ X5)\wedge((\neg r1\_incsp\_1\ X0\ X2\ X5)\wedge((\neg r1\_projred2\ X0\ X3\ X4\ X5)\wedge((r1\_projred2\ X0\ X4\ X5\ X6)\wedge((\neg r1\_incsp\_1\ X0\ X1\ X6)\wedge((X4\neq X6)\wedge((X1\neq X2)\wedge((r1\_incsp\_1\ X0\ X1\ X7)\wedge((r1\_incsp\_1\ X0\ X2\ X7)\wedge(\forall X8.(m1\_subset\_1\ X8\ (u1\_incsp\_1\ X0))\Rightarrow(\neg(r1\_incsp\_1\ X0\ X8\ X7)\wedge((\neg r1\_incsp\_1\ X0\ X8\ X4)\wedge((\neg r1\_incsp\_1\ X0\ X8\ X6)\wedge(k3\_relat\_1\ (k1\_projred1\ X0\ X3\ X5\ X1)\ (k1\_projred1\ X0\ X5\ X4\ X2) = k3\_relat\_1\ (k1\_projred1\ X0\ X3\ X6\ X1)\ (k1\_projred1\ X0\ X6\ X4\ X8))))))))))))))))))))))))$$