

t3_projred2

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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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_projred1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v6_incsp_1 X0) \wedge \\ & ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge ((v3_incproj X0) \wedge ((v4_incproj \\ & X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj X0) \wedge (l1_incsp_1 X0))))))) \wedge \\ & ((m1_subset_1 X1 (u2_incsp_1 X0)) \wedge ((m1_subset_1 X2 (u2_incsp_1 \\ & X0)) \wedge (m1_subset_1 X3 (u1_incsp_1 X0)))) \Rightarrow ((v1_funct_1 (k1_projred1 \\ & X0 X1 X2 X3)) \wedge (m1_subset_1 (k1_projred1 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_incsp_1 X0) (u1_incsp_1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow ((v5_incproj \\ & X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u2_incsp_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u2_incsp_1 X0)) \Rightarrow (\exists X3. (m1_subset_1 X3 \\ & (u1_incsp_1 X0)) \wedge ((r1_incsp_1 X0 X3 X1) \wedge (r1_incsp_1 X0 X3 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1 X0) \Rightarrow ((v6_incsp_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\ (\exists X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \wedge ((r1_incsp_1 X0 \\ X1 X3) \wedge (r1_incsp_1 X0 X2 X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj \\ X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u2_incsp_1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow (\neg(\neg r1_incsp_1 X0 X3 X1) \wedge ((\neg \\ r1_incsp_1 X0 X3 X2) \wedge (\neg \forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\ X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_incsp_1 X0) (u1_incsp_1 X0)))))) \Rightarrow \\ ((X4 = k1_projred1 X0 X1 X2 X3) \Leftrightarrow ((r1_tarski (k1_relset_1 (u1_incsp_1 \\ X0) X4) (u1_incsp_1 X0)) \wedge (\forall X5.(m1_subset_1 X5 (u1_incsp_1 \\ X0)) \Rightarrow ((X5 \in k1_relset_1 (u1_incsp_1 X0) X4) \Leftrightarrow (r1_incsp_1 X0 X5 X1)) \wedge \\ (\forall X5.(m1_subset_1 X5 (u1_incsp_1 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\ X6 (u1_incsp_1 X0)) \Rightarrow ((r1_incsp_1 X0 X5 X1) \wedge (r1_incsp_1 X0 X6 X2)) \Rightarrow \\ ((k1_funct_1 X4 X5 = X6) \Leftrightarrow (\exists X7.(m1_subset_1 X7 (u2_incsp_1 \\ X0)) \wedge ((r1_incsp_1 X0 X3 X7) \wedge ((r1_incsp_1 X0 X5 X7) \wedge (r1_incsp_1 \\ X0 X6 X7)))))))))))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj \\ X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ (u2_incsp_1 X0)) \Rightarrow (\neg(\neg r1_incsp_1 X0 X1 X3) \wedge ((\neg r1_incsp_1 X0 X1 \\ X4) \wedge ((r1_incsp_1 X0 X2 X4) \wedge (\forall X5.(m1_subset_1 X5 (u1_incsp_1 \\ X0)) \Rightarrow (\neg(r1_incsp_1 X0 X5 X3) \wedge (k1_funct_1 (k1_projred1 X0 X3 X4 \\ X1) X5 = X2)))))))))) \end{aligned}$$