

t11_projred2 (TMT- Tuc5iUqL1gxG7LhTV8XNkPBa2Q4Wsvb8)

October 27, 2020

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 $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $m1_projred2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $k1_projred2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_projred1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u2_incsp_1 X0)) \Rightarrow (\neg \forall X2.(m1_subset_1 X2 \\ (u1_incsp_1 X0)) \Rightarrow (r1_incsp_1 X0 X2 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj \\ X0) \wedge (l1_incsp_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u2_incsp_1 X0)) \Rightarrow ((\neg r1_incsp_1 \\ X0 X1 X2) \Rightarrow (k1_projred1 X0 X2 X2 X1 = k6_partfun1 (k1_projred2 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. (((v6_incsp_1 X0) \wedge \\ ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge ((v3_incproj X0) \wedge ((v4_incproj \\ X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj X0) \wedge (l1_incsp_1 X0)))))))) \wedge \\ ((m1_subset_1 X1 (u2_incsp_1 X0)) \wedge ((m1_subset_1 X2 (u2_incsp_1 \\ X0)) \wedge (m1_subset_1 X3 (u1_incsp_1 X0)))))) \Rightarrow ((v1_funct_1 (k1_projred1 \\ X0 X1 X2 X3)) \wedge (m1_subset_1 (k1_projred1 X0 X1 X2 X3) (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_incsp_1 X0) (u1_incsp_1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\
& ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj \\
& X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_incsp_1 X0) (u1_incsp_1 X0)))) \Rightarrow \\
& ((m1_projred2 X1 X0) \Leftrightarrow (\exists X2.(m1_subset_1 X2 (u1_incsp_1 \\
& X0)) \wedge (\exists X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \wedge (\exists X4. \\
& (m1_subset_1 X4 (u2_incsp_1 X0)) \wedge ((\neg r1_incsp_1 X0 X2 X3) \wedge ((\neg r1_incsp_1 \\
& X0 X2 X4) \wedge (X1 = k1_projred1 X0 X3 X4 X2)))))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\
& ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge ((v9_incproj \\
& X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 \\
& X0)) \Rightarrow (m1_projred2 (k6_partfun1 (k1_projred2 X0 X1)) X0))
\end{aligned}$$