

t36_algspec1

(TMM8EydyB6kNEcb3uqqUca6kasy2D5MSJpg)

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Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_instalgl1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_pua2mss1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(l1_msualg_1 X0) \Rightarrow (\forall X1.(l1_msualg_1 X1) \Rightarrow (\forall X2. \\
 & \quad ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (\forall X3.((v1_relat_1 \\
 & X3) \wedge (v1_funct_1 X3)) \Rightarrow ((r3_pua2mss1 X0 X1 X2 X3) \Rightarrow (((v1_funct_1 \\
 & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
 & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge \\
 & \quad ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u4_struct_0 X0) (u4_struct_0 \\
 & X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 \\
 & X0) (u4_struct_0 X1))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 \\
 & X0) \wedge (l1_msualg_1 X0))) \wedge (((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \wedge \\
 & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)))) \Rightarrow ((\neg v2_struct_0 (k2_algspec1 \\
 & X0 X1 X2)) \wedge ((\neg v11_struct_0 (k2_algspec1 X0 X1 X2)) \wedge ((v1_msualg_1 \\
 & (k2_algspec1 X0 X1 X2)) \wedge (l1_msualg_1 (k2_algspec1 X0 X1 X2))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v1_relat_1 \\
 & (k1_algspec1 X0 X1)) \wedge ((v4_relat_1 (k1_algspec1 X0 X1) X0) \wedge ((v1_funct_1 \\
 & (k1_algspec1 X0 X1)) \wedge (v1_partfun1 (k1_algspec1 X0 X1) X0))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\
& \quad X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_algspec1 X0 X1 X2) \Rightarrow (\forall X3. \\
& \quad ((\neg v2_struct_0 X3) \wedge ((\neg v11_struct_0 X3) \wedge ((v1_msualg_1 X3) \wedge \\
& \quad l1_msualg_1 X3)))) \Rightarrow ((X3 = k2_algspec1 X0 X1 X2) \Leftrightarrow ((r3_pua2mss1 \\
& \quad X0 X3 (k1_algspec1 (u1_struct_0 X0) X1) (k1_algspec1 (u4_struct_0 \\
& \quad X0) X2)) \wedge ((u1_struct_0 X3 = k10_xtuple_0 (k1_algspec1 (u1_struct_0 \\
& \quad X0) X1)) \wedge (u4_struct_0 X3 = k10_xtuple_0 (k1_algspec1 (u4_struct_0 \\
& \quad X0) X2)))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0) \Rightarrow (((v2_struct_0 X0) \wedge (v1_instalg1 X0)) \Rightarrow (v11_struct_0 X0)) \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v11_struct_0 X0) \wedge ((v1_instalg1 X0) \wedge (l1_msualg_1 \\
& \quad X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_algspec1 X0 X1 X2) \Rightarrow ((\\
& \quad v1_funct_1 (k1_algspec1 (u1_struct_0 X0) X1)) \wedge ((v1_funct_2 (\\
& \quad k1_algspec1 (u1_struct_0 X0) X1) (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k2_algspec1 X0 X1 X2))) \wedge (m1_subset_1 (k1_algspec1 (u1_struct_0 \\
& \quad X0) X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k2_algspec1 X0 X1 X2))))))))))
\end{aligned}$$