

t22_nagata_1

(TMLDC25zbt17rh4i8h6j8QvwauoZxLmaDy3)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ 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 $v1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_nagata_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc \\ & X0) \wedge (l1_pre_topc X0))) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ & X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) k1_numbers)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X0) k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) k1_numbers))))))) \Rightarrow (k3_nagata_1 X0 X1 X2 = k1_valued_1 X1 X2) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc \\ & X0) \wedge (l1_pre_topc X0))) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ & X0) k1_numbers) \wedge ((v1_pscomp_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \wedge ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) k1_numbers) \wedge ((v1_pscomp_1 \\ & X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) k1_numbers))))))) \Rightarrow ((v1_funct_1 (k1_valued_1 X1 X2)) \wedge ((\\ & v1_funct_2 (k1_valued_1 X1 X2) (u1_struct_0 X0) k1_numbers) \wedge (\\ & v1_pscomp_1 (k1_valued_1 X1 X2) X0))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ & X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) k1_numbers)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 (u1_struct_0 X0) k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \Rightarrow (((v1_pscomp_1 \\ & X1 X0) \wedge (v1_pscomp_1 X2 X0)) \Rightarrow (v1_pscomp_1 (k3_nagata_1 X0 X1 X2) \\ & X0)))) \end{aligned}$$