

l39_termord (TMbeKm- ciEoM7ZuXkFcxUTa6U9XXZpGMH52h)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_pre_poly : \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v6_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ 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 $v7_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_termord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_termord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_polynom7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_polynom7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_termord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge (l2_struct_0 X1)) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k15_pre_poly X0) \\ & (u1_struct_0 X1)) \wedge ((v3_polynom7 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k15_pre_poly X0) (u1_struct_0 X1)))))) \Rightarrow ((k2_polynom1 \\ & (k15_pre_poly X0) X1 X2 = k1_xboole_0) \vee (k2_polynom1 (k15_pre_poly \\ & X0) X1 X2 = k1_tarski (k2_polynom7 X0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. ((v1_partfun1 X1 (k15_pre_poly \\ & X0)) \wedge ((v1_relat_2 X1) \wedge ((v4_relat_2 X1) \wedge ((v6_relat_2 X1) \wedge ((\\ & v8_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k15_pre_poly \\ & X0) (k15_pre_poly X0)))))))))) \Rightarrow (\forall X2. ((\neg v7_struct_0 X2) \wedge \\ & (l2_struct_0 X2)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 (k15_pre_poly X0) (u1_struct_0 X2)) \wedge ((v1_polynom1 X3 (k15_pre_poly \\ & X0) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k15_pre_poly \\ & X0) (u1_struct_0 X2)))))) \Rightarrow ((k4_termord X0 X1 X2 X3 = k4_struct_0 \\ & X2) \Rightarrow (k2_polynom1 (k15_pre_poly X0) X2 (k5_termord X0 X1 X2 X3) = \\ & k1_xboole_0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge (l2_struct_0\ X2)) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2))))))) \Rightarrow ((k4_termord\ X0\ X1\ X2\ X3 \neq k4_struct_0\ X2) \Rightarrow (k3_termord\ X0\ X1\ X2\ X3 \in k2_polynom1\ (k15_pre_poly\ X0)\ X2\ (k5_termord\ X0\ X1\ X2\ X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l2_struct_0\ X0) \Rightarrow (l1_struct_0\ X0) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_ordinal1\ X0) \wedge (((v1_partfun1\ X1\ (k15_pre_poly\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (k15_pre_poly\ X0)))))))))) \wedge ((\neg v2_struct_0\ X2) \wedge (l2_struct_0\ X2)) \wedge ((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly\ X0)\ X2) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))))))) \Rightarrow ((v1_funct_1\ (k5_termord\ X0\ X1\ X2\ X3)) \wedge ((v1_funct_2\ (k5_termord\ X0\ X1\ X2\ X3)\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v3_polynom7\ (k5_termord\ X0\ X1\ X2\ X3)\ X0\ X2) \wedge (m1_subset_1\ (k5_termord\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0) \Rightarrow ((v2_struct_0\ X0) \Rightarrow (v7_struct_0\ X0)) \tag{7}$$

Theorem 1

$$\begin{aligned} \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.((v1_partfun1\ X1\ (k15_pre_poly \\ X0)) \wedge ((v1_relat_2\ X1) \wedge ((v4_relat_2\ X1) \wedge ((v6_relat_2\ X1) \wedge ((\\ v8_relat_2\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\ X0)\ (k15_pre_poly\ X0)))))))))) \Rightarrow (\forall X2.((\neg v7_struct_0\ X2) \wedge \\ (l2_struct_0\ X2)) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2 \\ X3\ (k15_pre_poly\ X0)\ (u1_struct_0\ X2)) \wedge ((v1_polynom1\ X3\ (k15_pre_poly \\ X0)\ X2) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k15_pre_poly \\ X0)\ (u1_struct_0\ X2))))))) \Rightarrow ((k2_polynom1\ (k15_pre_poly\ X0)\ X2 \\ (k5_termord\ X0\ X1\ X2\ X3) = k1_xboole_0) \vee (k2_polynom1\ (k15_pre_poly \\ X0)\ X2\ (k5_termord\ X0\ X1\ X2\ X3) = k1_tarski\ (k3_termord\ X0\ X1\ X2\ X3)))))) \end{aligned}$$