

t67_group_6 (TM-
LzhW41EZ9WsqR4qKKcA7ZnJpEjkop1sLN)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $r1_group_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (\forall X4. ((v1_funct_1 \\ & X4) \wedge ((v1_funct_2 X4 X1 X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 X2)))))) \Rightarrow (((v3_funct_2 X3 X0 X1) \wedge (v3_funct_2 X4 X1 X2)) \Rightarrow (v3_funct_2 \\ & (k1_partfun1 X0 X1 X1 X2 X3 X4) X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3)))))) \Rightarrow (k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((\neg v2_struct_0 \\
& X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge \\
& (((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 \\
& X1)))) \wedge (((\neg v2_struct_0 X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 X2) \wedge \\
& (l3_algstr_0 X2)))) \wedge (((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 \\
& X0) (u1_struct_0 X1)) \wedge ((v1_group_6 X3 X0 X1) \wedge (m1_subset_1 X3 (\\
& k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X1) (u1_struct_0 \\
& X2)) \wedge ((v1_group_6 X4 X1 X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X2)))))))))) \Rightarrow ((v1_funct_1 (k3_relat_1 \\
& X3 X4) \wedge ((v1_funct_2 (k3_relat_1 X3 X4) (u1_struct_0 X0) (u1_struct_0 \\
& X2)) \wedge (v1_group_6 (k3_relat_1 X3 X4) X0 X2)))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{4}$$

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
& (((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X2 X3)))) \Rightarrow ((v1_funct_1 (k1_partfun1 X0 X1 X2 X3 X4 X5)) \wedge (m1_subset_1 \\
& (k1_partfun1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 X0 X3))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\
& X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow ((r1_group_6 X0 X1) \Leftrightarrow \\
& (\exists X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) \\
& (u1_struct_0 X1)) \wedge ((v1_group_6 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge (v3_funct_2 \\
& X2 (u1_struct_0 X0) (u1_struct_0 X1))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\
& X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (\forall X2. ((\neg v2_struct_0 \\
& X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 X2) \wedge (l3_algstr_0 X2)))) \Rightarrow \\
& (((r1_group_6 X0 X1) \wedge (r1_group_6 X1 X2)) \Rightarrow (r1_group_6 X0 X2)))
\end{aligned}$$