

t13_integra4 (TMPMeYCJsbNMRrRhSJcXPug- mdMeV4FLi4pC)

October 27, 2020

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 $k1_numbers : \iota$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rfunct_3 : \iota \Rightarrow \iota$ be given. Let $k1_rfunct_3 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{1}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((v1_funct_1 \ X1) \wedge (\\ & m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 \ (k19_rfunct_3 \ X0 \ X1)) \wedge (m1_subset_1 \ (k19_rfunct_3 \\ & \ X0 \ X1) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((v1_funct_1 \ X1) \wedge (\\ & m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 \ (k18_rfunct_3 \ X0 \ X1)) \wedge (m1_subset_1 \ (k18_rfunct_3 \\ & \ X0 \ X1) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 \ X1) \wedge (v4_relat_1 \ X1 \ X0)) \Rightarrow (\\ & (v1_partfun1 \ X1 \ X0) \Leftrightarrow (k1_relset_1 \ X0 \ X1 = X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow ((v1_funct_2 X2 X0 \\ & X1) \Leftrightarrow (X0 = k1_relset_1 X0 X2))) \wedge ((X1 = k1_xboole_0) \Rightarrow ((v1_funct_2 \\ & X2 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\\ & \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow ((X2 = k19_rfunct_3 X0 X1) \Leftrightarrow ((k1_relset_1 X0 \\ & X2 = k1_relset_1 X0 X1) \wedge (\forall X3. (m1_subset_1 X3 X0) \Rightarrow ((X3 \in k1_relset_1 \\ & X0 X2) \Rightarrow (k1_seq_1 X2 X3 = k2_rfunct_3 (k1_seq_1 X1 X3)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\\ & \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow ((X2 = k18_rfunct_3 X0 X1) \Leftrightarrow ((k1_relset_1 X0 \\ & X2 = k1_relset_1 X0 X1) \wedge (\forall X3. (m1_subset_1 X3 X0) \Rightarrow ((X3 \in k1_relset_1 \\ & X0 X2) \Rightarrow (k1_seq_1 X2 X3 = k1_rfunct_3 (k1_seq_1 X1 X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow ((v1_partfun1 (k18_rfunct_3 X0 X1) X0) \wedge (v1_partfun1 \\ & (k19_rfunct_3 X0 X1) X0))) \end{aligned}$$