

t19_integr19

(TMUHfBi3iLV8HN8cMo9tph3HVr5fEozHR4V)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_integr15 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k1_nfcont_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_integr15 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & ((\neg v1_xboole_0 X1) \wedge ((v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
 & \quad k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
 & \quad (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid X0)))))) \Rightarrow ((r1_tarski \\
 & \quad X1 (k1_relset_1 k1_numbers X2)) \Rightarrow (r2_relset_1 k1_numbers k1_numbers \\
 & \quad (k1_nfcont_4 X0 k1_numbers (k2_partfun1 k1_numbers (k1_euclid \\
 & \quad X0) X2 X1)) (k2_partfun1 k1_numbers k1_numbers (k1_nfcont_4 X0 \\
 & \quad \quad k1_numbers X2) X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & ((\neg v1_xboole_0 X1) \wedge ((v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
 & \quad k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
 & \quad (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid X0)))))) \Rightarrow (\forall X3. \\
 & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X1 (k1_euclid X0)) \wedge (m1_subset_1 \\
 & \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 X1 (k1_euclid X0)))))) \Rightarrow ((X2 = X3) \Rightarrow \\
 & \quad (k1_nfcont_4 X0 k1_numbers X2 = k1_nfcont_4 X0 X1 X3))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& ((\neg v1_xboole_0 X1) \wedge ((v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid X0)))))) \Rightarrow (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X1 (k1_euclid X0)) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X1 (k1_euclid X0)))))) \Rightarrow (((v3_integr15 \\
& X2 X0) \wedge (X2 = X3)) \Rightarrow (v1_integr15 X3 X0 X1))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\
& X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
& (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 X0 (k1_euclid X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 (k1_euclid X1)))))) \Rightarrow ((v1_integr15 X2 X1 X0) \Leftrightarrow (\\
& v1_comseq_2 (k1_nfcont_4 X1 X0 X2))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{6}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\
& X0 X1 X2 X3 = k5_relat_1 X2 X3)
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge ((v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & k1_numbers)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid X0)))))) \Rightarrow ((r1_tarski \\ & X1 (k1_relset_1 k1_numbers X2) \Rightarrow ((v1_funct_1 (k2_partfun1 k1_numbers \\ & (k1_euclid X0) X2 X1)) \wedge ((v1_funct_2 (k2_partfun1 k1_numbers (\\ & k1_euclid X0) X2 X1) X1 (k1_euclid X0)) \wedge (m1_subset_1 (k2_partfun1 \\ & k1_numbers (k1_euclid X0) X2 X1) (k1_zfmisc_1 (k2_zfmisc_1 X1 (\\ & k1_euclid X0)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\ & (k1_euclid X0)))))) \Rightarrow ((v1_funct_1 (k1_nfcont_4 X0 X1 X2)) \wedge (m1_subset_1 \\ & (k1_nfcont_4 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid \\ & X1)))))) \Rightarrow (((r1_tarski X0 (k1_relset_1 k1_numbers X2)) \wedge (v3_integr15 \\ & (k2_partfun1 k1_numbers (k1_euclid X1) X2 X0) X1)) \Rightarrow (v1_comseq_2 \\ & (k2_partfun1 k1_numbers k1_numbers (k1_nfcont_4 X1 k1_numbers \\ & X2) X0)))) \end{aligned}$$