

t33_topreala (TMPb- wjwiB6i9bVy21XWqDxjoWwDgPnSpZFW)

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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 $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_topreala : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k4_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X2. ((v1_funct_1 \\
 & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) \\
 & (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) \\
 & (u1_struct_0 (k15_euclid np_2))))))) \Rightarrow ((\forall X3.(m1_subset_1 \\
 & X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow (k1_funct_1 \\
 & X2 (k4_tarski X3 X4) = k2_finseq_4 k1_numbers X3 X4))) \Rightarrow (k7_relset_1 \\
 & (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 \\
 & (k15_euclid np_2)) X2 (k2_zfmisc_1 X0 X1) = k4_card_3 (k5_funct_4 \\
 & (k1_zfmisc_1 k1_numbers) np_1 np_2 X0 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X3 X0)\wedge(m1_subset_1 X4 X0)))\Rightarrow(k5_funct_4 X0 X1 X2 X3 X4 = k4_funct_4 X1 X2 X3 X4) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k2_finseq_4 X0 X1 X2 = k10_finseq_1 X1 X2) \quad (5)$$

Assume the following.

$$\neg v1_finset_1 k1_numbers \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (7)$$

Assume the following.

$$(v1_funct_1 k2_topreala)\wedge((v1_funct_2 k2_topreala (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))\wedge(m1_subset_1 k2_topreala (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))))) \quad (8)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2))))))\Rightarrow((X0 = k2_topreala)\Leftrightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2.(v1_xreal_0 X2)\Rightarrow(k1_funct_1 X0 (k4_tarski X1 X2) = k10_finseq_1 X1 X2)))) \quad (9)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v3_finseq_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v4_funct_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v3_finseq_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_finseq_1 X1)) \quad (15)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k7_relset_1 (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)) k2_topreala (k2_zfmisc_1 X0 X1) = k4_card_3 (k4_funct_4 np_1 np_2 X0 X1)))$$