

l25_realset2 (TMbrB- DyVxS9RC5uEos2nXRQjj4Bsw3TnVCa)

October 27, 2020

Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $c4_realset2 : \iota$ be given. Let $k6_domain.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_funct.7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_realset2 : \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ 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 $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k5_binop.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Assume the following.

$$\neg v1_xboole.0 \ np_2 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole.0 \ X0) \wedge (m1_subset.1 \ X1 \ X0)) \Rightarrow (k6_domain.1 \ X0 \ X1 = k1_tarski \ X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct.1 \ X1) \wedge \\ & ((v1_funct.2 \ X1 \ (k2_zfmisc.1 \ X0 \ X0) \ X0) \wedge (m1_subset.1 \ X1 \ (k1_zfmisc.1 \\ & (k2_zfmisc.1 \ (k2_zfmisc.1 \ X0 \ X0) \ X0)))) \wedge ((m1_subset.1 \ X2 \ X0) \wedge \\ & (m1_subset.1 \ X3 \ X0))) \Rightarrow (k5_binop.1 \ X0 \ X1 \ X2 \ X3 = k1_binop.1 \ X1 \ X2 \ X3) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v1_xboole.0 \ X0) \wedge \\ & ((\neg v1_xboole.0 \ X1) \wedge ((m1_subset.1 \ X2 \ X0) \wedge (m1_subset.1 \ X3 \ X1)))) \Rightarrow \\ & (k1_domain.1 \ X0 \ X1 \ X2 \ X3 = k4_tarski \ X2 \ X3) \end{aligned} \tag{4}$$

Assume the following.

$$k2_zfmisc_1 (k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2))) (k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2))) = k6_domain_1 (k2_zfmisc_1 np_2 np_2) (k1_domain_1 np_2 np_2 (k1_funct_7 np_1 np_2) (k1_funct_7 np_1 np_2)) \quad (5)$$

Assume the following.

$$k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2)) = k6_domain_1 np_2 (k1_funct_7 np_1 np_2) \quad (6)$$

Assume the following.

$$k5_binop_1 np_2 k2_realset2 (k1_funct_7 np_1 np_2) (k1_funct_7 np_1 np_2) = k1_funct_7 np_1 np_2 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow (\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (8)$$

Assume the following.

$$(v1_funct_1 k2_realset2)\wedge((v1_funct_2 k2_realset2 (k2_zfmisc_1 np_2 np_2) np_2)\wedge(m1_subset_1 k2_realset2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 np_2 np_2) np_2)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.m1_subset_1 (k1_funct_7 X0 X1) X1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow (m1_subset_1 (k1_domain_1 X0 X1 X2 X3) (k2_zfmisc_1 X0 X1)) \quad (11)$$

Assume the following.

$$c4_realset2 = np_2 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow (X2 = X0)) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.\forall X2.k1_binop_1 X0 X1 X2 = k1_funct_1 X0 (k4_tarski X1 X2)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (15)$$

Theorem 1

$$\forall X0.(X0 \in k2_zfmisc_1 (k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2))) (k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2))))\Rightarrow(k1_funct_1 k2_realset2 X0 \in k6_subset_1 c4_realset2 (k6_domain_1 np_2 (k1_funct_7 k6_numbers np_2)))$$