

l29_realset2 (TM- NAsDo3v5bM9Y9sLmNBxMPTPunP3Cn1GnY)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $c4_realset2 : \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_realset2 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$np_2 = k2_tarski\ k1_xboole_0\ np_1 \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1\ X1) \wedge \\ & ((v1_funct_2\ X1\ (k2_zfmisc_1\ X0\ X0)\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)\ X0)))))) \wedge ((m1_subset_1\ X2\ X0) \wedge \\ & (m1_subset_1\ X3\ X0))) \Rightarrow (k5_binop_1\ X0\ X1\ X2\ X3 = k1_binop_1\ X1\ X2\ X3) \end{aligned} \quad (4)$$

Assume the following.

$$k1_funct_7\ np_1\ np_2 = np_1 \quad (5)$$

Assume the following.

$$k1_funct_7\ k6_numbers\ np_2 = k6_numbers \quad (6)$$

Assume the following.

$$k5_binop_1\ np_2\ k1_realset2\ (k1_funct_7\ np_1\ np_2)\ (k1_funct_7\ np_1\ np_2) = k1_funct_7\ k6_numbers\ np_2 \quad (7)$$

Assume the following.

$$k5_binop_1 \text{ } np_2 \text{ } k1_realset2 (k1_funct_7 \text{ } np_1 \text{ } np_2) (k1_funct_7 \text{ } k6_numbers \text{ } np_2) = k1_funct_7 \text{ } np_1 \text{ } np_2 \quad (8)$$

Assume the following.

$$k5_binop_1 \text{ } np_2 \text{ } k1_realset2 (k1_funct_7 \text{ } k6_numbers \text{ } np_2) (k1_funct_7 \text{ } np_1 \text{ } np_2) = k1_funct_7 \text{ } np_1 \text{ } np_2 \quad (9)$$

Assume the following.

$$k5_binop_1 \text{ } np_2 \text{ } k1_realset2 (k1_funct_7 \text{ } k6_numbers \text{ } np_2) (k1_funct_7 \text{ } k6_numbers \text{ } np_2) = k1_funct_7 \text{ } k6_numbers \text{ } np_2 \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k2_tarski \text{ } X0 \text{ } X1) \quad (11)$$

Assume the following.

$$(v1_funct_1 \text{ } k1_realset2) \wedge ((v1_funct_2 \text{ } k1_realset2 (k2_zfmisc_1 \text{ } np_2 \text{ } np_2) \text{ } np_2) \wedge (m1_subset_1 \text{ } k1_realset2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \text{ } np_2 \text{ } np_2) \text{ } np_2)))))) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. m1_subset_1 (k1_funct_7 \text{ } X0 \text{ } X1) \text{ } X1 \quad (13)$$

Assume the following.

$$c4_realset2 = np_2 \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_tarski \text{ } X0 \text{ } X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski \text{ } X0 \text{ } X1 = k2_tarski \text{ } X1 \text{ } X0 \quad (16)$$

Theorem 1

$$\forall X0. (m1_subset_1 \text{ } X0 \text{ } c4_realset2) \Rightarrow (\forall X1. (m1_subset_1 \text{ } X1 \text{ } c4_realset2) \Rightarrow (\forall X2. (m1_subset_1 \text{ } X2 \text{ } c4_realset2) \Rightarrow (k1_binop_1 \text{ } k1_realset2 (k1_binop_1 \text{ } k1_realset2 \text{ } X0 \text{ } X1) \text{ } X2 = k1_binop_1 \text{ } k1_realset2 \text{ } X0 (k1_binop_1 \text{ } k1_realset2 \text{ } X1 \text{ } X2))))))$$