

t48_interval
(TMYTX2t9guTR6q1uyR8xJCBA88XTkjbwbQn)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $m1_interval : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow (((X1 = k2_interval \\ & X0 X2 X3) \wedge (r1_tarski X2 X3)) \Rightarrow (k10_interval X0 X1 = k2_interval X0 \\ & (k3_subset_1 X0 X3) (k3_subset_1 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(k4_xboole_0 X0 X1 = k1_xboole_0) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\ & X1) \wedge (m1_interval X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval X2 \\ & X0))) \Rightarrow ((r1_interval X0 X1 X2) \Leftrightarrow (X1 = X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k2_interval X0 X1 X2 = \\ & k1_interval X0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\neg v1_xboole_0 (k1_interval1 X0 (k1_subset_1 X0) (k1_subset_1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\neg v1_xboole_0 (k1_interval1 X0 (k2_subset_1 X0) (k2_subset_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.m1_subset_1 (k2_subset_1 X0) (k1_zfmisc_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (m1_interval1 (k2_interval1 X0 X1 X2) X0) \quad (9)$$

Assume the following.

$$\forall X0.m1_subset_1 (k1_subset_1 X0) (k1_zfmisc_1 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k3_subset_1 X0 X1 = k4_xboole_0 X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.k2_subset_1 X0 = X0 \quad (12)$$

Assume the following.

$$\forall X0.k1_subset_1 X0 = k1_xboole_0 \quad (13)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (r1_interval1 X0 (k10_interval1 X0 (k2_interval1 X0 (k2_subset_1 X0) (k2_subset_1 X0))) (k2_interval1 X0 (k1_subset_1 X0) (k1_subset_1 X0)))$$