

t50_interval
 (TMHejtt8yDSXpWyN3dnzwU5nzzjbAFQFTfP)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_interval : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Let $k3_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $r1_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\neg \forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (k10_interval X0 (k3_interval X0 X1 X1) = k2_interval \\ & X0 (k1_subset_1 X0) (k1_subset_1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (r1_interval X0 (k10_interval X0 \\ & (k2_interval X0 (k2_subset_1 X0) (k2_subset_1 X0))) (k2_interval \\ & X0 (k1_subset_1 X0) (k1_subset_1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v1_xboole_0 (k2_interval X0 \\ & (k1_subset_1 X0) (k1_subset_1 X0))) \wedge (m1_interval (k2_interval \\ & X0 (k1_subset_1 X0) (k1_subset_1 X0)) X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v1_xboole_0 (k2_interval X0 \\ & (k2_subset_1 X0) (k2_subset_1 X0))) \wedge (m1_interval (k2_interval \\ & X0 (k2_subset_1 X0) (k2_subset_1 X0)) X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (r1_interval X0 (k3_interval X0 X1 X1) X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \Rightarrow (r1_interval1 X0 (k4_interval1 X0 X1 X1) X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 X0))) \Rightarrow ((r1_interval1 X0 X1 X2) \Leftrightarrow (X1 = X2)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 X0))) \Rightarrow (\neg v1_xboole_0 (k4_interval1 X0 X1 X2)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 X0))) \Rightarrow (\neg v1_xboole_0 (k3_interval1 X0 X1 X2)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 X0))) \Rightarrow (m1_interval1 (k4_interval1 X0 X1 X2) X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 X0))) \Rightarrow (m1_interval1 (k3_interval1 X0 X1 X2) X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0))) \Rightarrow ((\neg v1_xboole_0 (k10_interval1 X0 X1)) \wedge (m1_interval1 (k10_interval1 X0 X1) X0)) \quad (12)$$

Assume the following.

$$\forall X0.k2_subset_1 X0 = X0 \quad (13)$$

Assume the following.

$$\forall X0.k1_subset_1 X0 = k1_xboole_0 \quad (14)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\neg \forall X1.((\neg v1_xboole_0 X1) \wedge (m1_interval1 X1 X0)) \Rightarrow (k10_interval1 X0 (k4_interval1 X0 X1 X1) = k2_interval1 X0 (k2_subset_1 X0) (k2_subset_1 X0)))$$