

t14_interval1

(TMZvVhf85xbLu65VX2CYkgnGwW8Kb9ECKNU)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_interval : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (\forall X3. (X3 \in k1_interval \\ & X0 X1 X2) \Leftrightarrow ((r1_tarski X1 X3) \wedge (r1_tarski X3 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k2_interval X0 X1 X2 = \\ & k1_interval X0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0))) \Rightarrow (m1_subset_1 (k6_interval X0 X1) (k1_zfmisc_1 \\ & X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0))) \Rightarrow (m1_subset_1 (k5_interval X0 X1) (k1_zfmisc_1 \\ & X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & X0)) \Rightarrow ((X2 = k6_interval X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ & X0)) \wedge (X1 = k2_interval X0 X3 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& (m1_interval X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& X0)) \Rightarrow ((X2 = k5_interval X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& X0)) \wedge (X1 = k2_interval X0 X2 X3))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& (m1_interval X1 X0)) \Rightarrow (\forall X2.(X2 \in X1) \Leftrightarrow ((r1_tarski (k5_interval \\
& X0 X1) X2) \wedge (r1_tarski X2 (k6_interval X0 X1))))))
\end{aligned}$$