

t28_interval
(TMa5Lm5mcVUDgqyqGQbFZgddAmFek8z1P1G)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_interval : \iota \Rightarrow \iota \Rightarrow o$ 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 $k7_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_interval : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_interval X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (k7_interval X0 X1 = k1_setfam_1 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_interval X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. (X2 \in X1) \Rightarrow ((X2 = k8_interval X0 X1) \Leftrightarrow (\forall X3. (X3 \in X1) \Rightarrow (r1_tarski X3 X2)))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_interval X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. (X2 \in X1) \Rightarrow ((X2 = k7_interval X0 X1) \Leftrightarrow (\forall X3. (X3 \in X1) \Rightarrow (r1_tarski X2 X3)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow ((v1_interval X1 X0) \Leftrightarrow (\exists X2. \exists X3. (X2 \in X1) \wedge (X3 \in X1) \wedge (\forall X4. (X4 \in X1) \Leftrightarrow ((r1_tarski X2 X4) \wedge (r1_tarski X4 X3)))))) \quad (4)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_interval X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow ((X1 \in X2) \Leftrightarrow ((r1_tarski (k7_interval X0 X2) X1) \wedge (r1_tarski X1 (k8_interval X0 X2))))$$