

t25\_interval  
(TMZjc9bFKLcjuc7LpCSUsPouV1WoaJVZPSQ)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k2\_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_interval : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X3. (X3 \in k1\_interval \\ & X0 X1 X2) \Leftrightarrow ((r1\_tarski X1 X3) \wedge (r1\_tarski X3 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (k2\_interval X0 X1 X2 = \\ & k1\_interval X0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (m1\_subset\_1 (k1\_interval \\ & X0 X1 X2) (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((v1\_interval X1 X0) \Leftrightarrow (\exists X2. \exists X3. (X2 \in X1) \wedge \\ & (X3 \in X1) \wedge (\forall X4. (X4 \in X1) \Leftrightarrow ((r1\_tarski X2 X4) \wedge (r1\_tarski X4 \\ & X3)))))) \end{aligned} \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski \\ & X1 X2) \Rightarrow ((\neg v1\_xboole\_0 (k2\_interval X0 X1 X2)) \wedge ((v1\_interval ( \\ & k2\_interval X0 X1 X2) X0) \wedge (m1\_subset\_1 (k2\_interval X0 X1 X2) (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0)))))))))) \end{aligned}$$