

# t41\_interval1

(TMJCYaDhZE98s2uciRV3Hn3yvaD2t9GeeCk)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k2\_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_interval : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_interval : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_interval X1 X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_interval \\ & X2 X0)) \Rightarrow (k9\_interval X0 X1 X2 = k2\_interval X0 (k7\_subset\_1 X0 (k5\_interval \\ & X0 X1) (k6\_interval X0 X2)) (k7\_subset\_1 X0 (k6\_interval X0 X1) ( \\ & k5\_interval X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_interval X1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & X0)) \Rightarrow ((X2 = k6\_interval X0 X1) \Leftrightarrow (\exists X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & X0)) \wedge (X1 = k2\_interval X0 X3 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_interval X1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & X0)) \Rightarrow ((X2 = k5\_interval X0 X1) \Leftrightarrow (\exists X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & X0)) \wedge (X1 = k2\_interval X0 X2 X3)))))) \end{aligned} \tag{3}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_interval X1 X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_interval \\ & X2 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow ((X1 = k2\_interval X0 X3 X4) \Rightarrow \\ & (k9\_interval X0 X1 X2 = k2\_interval X0 (k7\_subset\_1 X0 X3 (k6\_interval \\ & X0 X2)) (k7\_subset\_1 X0 X4 (k5\_interval X0 X2)))))))) \end{aligned}$$