

t63_interval1

(TMYdT6EDsCSYAdajEfeJYdTCanfUYs2oewM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_roughs_1 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m2_interval1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_interval1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_interval1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_interval1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k14_interval1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_roughs_1 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1.(m2_interval1 X1 X0) \Rightarrow (\forall X2.(m2_interval1 \\ & X2 X0) \Rightarrow (k15_interval1 X0 (k17_interval1 X0 X1 X2) = k9_subset_1 (u1_struct_0 \\ & X0) (k15_interval1 X0 X1) (k15_interval1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_roughs_1 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1.(m2_interval1 X1 X0) \Rightarrow (\forall X2.(m2_interval1 \\ & X2 X0) \Rightarrow (k14_interval1 X0 (k17_interval1 X0 X1 X2) = k9_subset_1 (u1_struct_0 \\ & X0) (k14_interval1 X0 X1) (k14_interval1 X0 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_roughs_1 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m2_interval1 X1 X0) \wedge (m2_interval1 X2 \\ & X0))) \Rightarrow (m2_interval1 (k17_interval1 X0 X1 X2) X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v3_roughs_1 X0) \wedge \\ & (l1_orders_2 X0))) \wedge (m2_interval1 X1 X0)) \Rightarrow (m1_subset_1 (k15_interval1 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v3_roughs_1 X0)\wedge(l1_orders_2 X0)))\wedge(m2_interval1 X1 X0))\Rightarrow(m1_subset_1 (k14_interval1 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_roughs_1 X0)\wedge(l1_orders_2 X0)))\Rightarrow(\forall X1.(m2_interval1 X1 X0)\Rightarrow(\forall X2.(m2_interval1 X2 X0)\Rightarrow((r2_interval1 X0 X1 X2)\Leftrightarrow((k14_interval1 X0 X1 = k14_interval1 X0 X2)\wedge(k15_interval1 X0 X1 = k15_interval1 X0 X2)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow(k9_subset_1 X0 X1 X2 = k9_subset_1 X0 X2 X1) \quad (7)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_roughs_1 X0)\wedge(l1_orders_2 X0)))\Rightarrow(\forall X1.(m2_interval1 X1 X0)\Rightarrow(\forall X2.(m2_interval1 X2 X0)\Rightarrow(r2_interval1 X0 (k17_interval1 X0 X1 X2) (k17_interval1 X0 X2 X1))))$$