

t20_interval
(TMPk6oj96CdToEjYRx5WtahxBKmbJk2tg6Y)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_interval : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_interval : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge (m1_interval \\ & X2 X0)) \Rightarrow (k3_interval X0 X1 X2 = k2_interval X0 (k9_subset_1 X0 (k5_interval \\ & X0 X1) (k5_interval X0 X2)) (k9_subset_1 X0 (k6_interval X0 X1) (\\ & k6_interval X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval X1 X0)) \Rightarrow (X1 = k2_interval X0 (k5_interval X0 X1) (k6_interval \\ & X0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\ & X1) \wedge (m1_interval X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval X2 \\ & X0))) \Rightarrow ((r1_interval X0 X1 X2) \Leftrightarrow (X1 = X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X0 = X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\wedge((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0)))\Rightarrow(\neg v1_xboole_0 (k3_interval1 X0 X1 X2)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0)))\Rightarrow(m1_subset_1 (k6_interval1 X0 X1) (k1_zfmisc_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0)))\Rightarrow(m1_subset_1 (k5_interval1 X0 X1) (k1_zfmisc_1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\wedge((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0)))\Rightarrow(m1_interval1 (k3_interval1 X0 X1 X2) X0) \quad (9)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0))\Rightarrow(k3_interval1 X0 X1 X2 = k3_setfam_1 X1 X2))) \quad (10)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\Rightarrow(r1_interval1 X0 (k3_interval1 X0 X1 X1) X1))$$