

t35_interval1

(TMEr7n4YsjoeFSnbw7t5s3MGPH5JaHUrJyW)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_interval1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_interval1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_interval1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_interval1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_interval1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_interval1 X1 X0) \wedge \\ & \quad (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. \\ & ((\neg v1_xboole_0 X2) \wedge ((v1_interval1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & \quad (k1_zfmisc_1 X0)))))) \Rightarrow (k3_setfam_1 X1 (k2_setfam_1 X1 X2) = X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((\neg v1_xboole_0 \\ & X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 \\ & X0)))) \Rightarrow ((r1_interval1 X0 X1 X2) \Leftrightarrow (X1 = X2)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & (m1_interval1 X1 X0)) \Rightarrow ((\neg v1_xboole_0 X1) \wedge ((v1_interval1 X1 X0) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((\neg v1_xboole_0 \\ & X1) \wedge (m1_interval1 X1 X0)) \wedge ((\neg v1_xboole_0 X2) \wedge (m1_interval1 X2 \\ & X0)))) \Rightarrow (\neg v1_xboole_0 (k4_interval1 X0 X1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_interval1 X1 X0) \Rightarrow (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\wedge((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0))))\Rightarrow(m1_interval1 (k4_interval1 X0 X1 X2) X0) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0))\Rightarrow(k4_interval1 X0 X1 X2 = k2_setfam.1 X1 X2))) \quad (7)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0))\Rightarrow(k3_interval1 X0 X1 X2 = k3_setfam.1 X1 X2))) \quad (8)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_interval1 X1 X0))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_interval1 X2 X0))\Rightarrow(r1_interval1 X0 (k3_interval1 X0 X1 (k4_interval1 X0 X1 X2) X1))))$$