

t29_e_siec

(TMVxg6F3tmV4pqN1CzRwZPSxPYPQvie1pQ1)

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Let $v2_e_siec : \iota \Rightarrow o$ be given. Let $v3_e_siec : \iota \Rightarrow o$ be given. Let $l1_e_siec : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_e_siec : \iota \Rightarrow \iota$ be given. Let $k16_e_siec : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $u2_e_siec : \iota \Rightarrow \iota$ be given. Let $k2_relat_1 : \iota \Rightarrow \iota$ be given. Let $u1_e_siec : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (r1_tarski X0 X1) \Rightarrow (r1_tarski (k2_xboole_0 X0 X2) (k2_xboole_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow (\forall X2. (v1_relat_1 X2) \Rightarrow (k3_relat_1 (k2_xboole_0 X0 X1) X2 = k2_xboole_0 (k3_relat_1 X0 X2) (k3_relat_1 X1 X2)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (k4_xboole_0 X0 X1 = k1_xboole_0) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k4_xboole_0 X0 X1) X0 \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow (\forall X2. (v1_relat_1 X2) \Rightarrow (k3_relat_1 (k3_relat_1 X0 X1) X2 = k3_relat_1 X0 (k3_relat_1 X1 X2)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1_tarSKI X0 X1)\Rightarrow(r1_tarSKI (k4_xboole_0 X0 X2) (k4_xboole_0 X1 X2)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(v1_relat_1 X1)\Rightarrow(\forall X2.(v1_relat_1 X2)\Rightarrow(k3_relat_1 X0 (k2_xboole_0 X1 X2) = k2_xboole_0 (k3_relat_1 X0 X1) (k3_relat_1 X0 X2)))) \quad (8)$$

Assume the following.

$$\forall X0.((v2_e_siec X0)\wedge((v3_e_siec X0)\wedge(l1_e_siec X0)))\Rightarrow((k3_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 (u2_e_siec X0)))) (k2_relat_1 (k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))))) = k1_xboole_0)\wedge(k3_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 (u1_e_siec X0)))) (k2_relat_1 (k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))))) = k1_xboole_0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(v1_relat_1 X1)\Rightarrow(r1_tarSKI (k10_xtuple_0 (k3_relat_1 X0 X1) (k10_xtuple_0 X1))) \quad (10)$$

Assume the following.

$$\forall X0.((v2_e_siec X0)\wedge((v3_e_siec X0)\wedge(l1_e_siec X0)))\Rightarrow(((k3_relat_1 (k2_relat_1 (k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))) (k2_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 (u2_e_siec X0)))))) = k2_relat_1 (k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 X0))))\wedge(k3_relat_1 (k2_relat_1 (k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))) (k2_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 (u1_e_siec X0)))))) = k2_relat_1 (k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (12)$$

Assume the following.

$$\forall X0.((v2_e_siec X0)\wedge((v3_e_siec X0)\wedge(l1_e_siec X0)))\Rightarrow((r1_tarSKI (k9_xtuple_0 (u1_e_siec X0) (u1_struct_0 X0))\wedge(r1_tarSKI (k10_xtuple_0 (u1_e_siec X0) (u1_struct_0 X0))\wedge(r1_tarSKI (k9_xtuple_0 (u2_e_siec X0) (u1_struct_0 X0))\wedge(r1_tarSKI (k10_xtuple_0 (u2_e_siec X0) (u1_struct_0 X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Rightarrow(k2_xboole_0 X0 X1 = X1) \quad (14)$$

Assume the following.

$$\forall X0.k3_relat_1 (k4_relat_1 X0) (k4_relat_1 X0) = k4_relat_1 X0 \quad (15)$$

Assume the following.

$$\forall X0.k2_relat_1 (k4_relat_1 X0) = k4_relat_1 X0 \quad (16)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0))\wedge(v1_funct_1 (k4_relat_1 X0)) \quad (17)$$

Assume the following.

$$\forall X0.(l1_e_siec X0)\Rightarrow(v1_relat_1 (u2_e_siec X0)) \quad (18)$$

Assume the following.

$$\forall X0.(l1_e_siec X0)\Rightarrow(v1_relat_1 (u1_e_siec X0)) \quad (19)$$

Assume the following.

$$\forall X0.v1_relat_1 (k4_relat_1 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k3_relat_1 X0 X1) \quad (21)$$

Assume the following.

$$\forall X0.((v2_e_siec X0)\wedge((v3_e_siec X0)\wedge(l1_e_siec X0)))\Rightarrow (v1_relat_1 (k16_e_siec X0)) \quad (22)$$

Assume the following.

$$\forall X0.((v2_e_siec X0)\wedge((v3_e_siec X0)\wedge(l1_e_siec X0)))\Rightarrow (v1_relat_1 (k15_e_siec X0)) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_e_siec X0)\Rightarrow & ((v2_e_siec X0)\Leftrightarrow((r1_tarSKI (u1_e_siec \\ X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))\wedge & ((r1_tarSKI \\ (u2_e_siec X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))\wedge & \\ ((k3_relat_1 (u1_e_siec X0) (u1_e_siec X0) = u1_e_siec X0)\wedge & ((k3_relat_1 \\ (u1_e_siec X0) (u2_e_siec X0) = u1_e_siec X0)\wedge & ((k3_relat_1 (u2_e_siec \\ X0) (u2_e_siec X0) = u2_e_siec X0)\wedge & (k3_relat_1 (u2_e_siec X0) (\\ u1_e_siec X0) = u2_e_siec X0)))))) & \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_e_siec\ X0)\wedge((v3_e_siec\ X0)\wedge(l1_e_siec\ X0)))\Rightarrow \\ & (k16_e_siec\ X0 = k2_xboole_0\ (k2_relat_1\ (k4_xboole_0\ (u1_e_siec \\ & \quad X0)\ (k4_relat_1\ (u1_struct_0\ X0))))\ (k4_relat_1\ (k4_xboole_0 \\ & \quad (u1_struct_0\ X0)\ (k10_xtuple_0\ (u1_e_siec\ X0)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_e_siec\ X0)\wedge((v3_e_siec\ X0)\wedge(l1_e_siec\ X0)))\Rightarrow \\ & (k15_e_siec\ X0 = k2_xboole_0\ (k2_relat_1\ (k4_xboole_0\ (u2_e_siec \\ & \quad X0)\ (k4_relat_1\ (u1_struct_0\ X0))))\ (k4_relat_1\ (k4_xboole_0 \\ & \quad (u1_struct_0\ X0)\ (k10_xtuple_0\ (u2_e_siec\ X0)))))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (27)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_e_siec\ X0)\wedge((v3_e_siec\ X0)\wedge(l1_e_siec\ X0)))\Rightarrow \\ & ((k3_relat_1\ (k15_e_siec\ X0)\ (k15_e_siec\ X0) = k15_e_siec\ X0)\wedge \\ & ((k3_relat_1\ (k15_e_siec\ X0)\ (k16_e_siec\ X0) = k15_e_siec\ X0)\wedge \\ & ((k3_relat_1\ (k16_e_siec\ X0)\ (k15_e_siec\ X0) = k16_e_siec\ X0)\wedge \\ & (k3_relat_1\ (k16_e_siec\ X0)\ (k16_e_siec\ X0) = k16_e_siec\ X0)))) \end{aligned}$$