

t23_e_siec (TMNM-
ByhH9sqpDP4ARcCQpSKHLS5p5fKwK4q)

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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 $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $u1_e_siec : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_e_siec : \iota \Rightarrow \iota$ be given. Let $k8_e_siec : \iota \Rightarrow \iota$ be given. Let $k7_e_siec : \iota \Rightarrow \iota$ be given. Let $k11_e_siec : \iota \Rightarrow \iota$ be given. Let $k1_sysrel : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski (k9_xtuple_0 X1) X0) \Rightarrow (k3_relat_1 (k4_relat_1 X0) X1 = X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((r1_tarski X2 (k2_zfmisc_1 X0 X1)) \Rightarrow ((r1_tarski (k9_xtuple_0 X2) X0) \wedge (r1_tarski (k10_xtuple_0 X2) X1))) \quad (2)$$

Assume the following.

$$\forall X0. ((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow ((r1_tarski (k10_e_siec X0) (k2_zfmisc_1 (k8_e_siec X0) (k7_e_siec X0))) \wedge (r1_tarski (k11_e_siec X0) (k2_zfmisc_1 (k8_e_siec X0) (k7_e_siec X0)))) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ ((k10_xtuple_0 (u1_e_siec X0) = k10_xtuple_0 (k1_sysrel (u1_e_siec \\ X0))) \wedge ((k10_xtuple_0 (u1_e_siec X0) = k9_xtuple_0 (k1_sysrel \\ (u1_e_siec X0))) \wedge ((k10_xtuple_0 (u2_e_siec X0) = k10_xtuple_0 \\ (k1_sysrel (u2_e_siec X0))) \wedge ((k10_xtuple_0 (u2_e_siec X0) = k9_xtuple_0 \\ (k1_sysrel (u2_e_siec X0))) \wedge (k10_xtuple_0 (u1_e_siec X0) = k10_xtuple_0 \\ (u2_e_siec X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (5)$$

Assume the following.

$$\forall X0. k6_partfun1 X0 = k4_relat_1 X0 \quad (6)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (v1_relat_1 (k11_e_siec X0)) \quad (7)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (v1_relat_1 (k10_e_siec X0)) \quad (8)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (k7_e_siec X0 = k10_xtuple_0 (u1_e_siec X0)) \quad (9)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (k11_e_siec X0 = k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 \\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (k10_e_siec X0 = k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 \\ X0))) \quad (11)$$

Assume the following.

$$\forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ (k8_e_siec X0 = k4_xboole_0 (u1_struct_0 X0) (k7_e_siec X0)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_e_siec X0) \wedge ((v3_e_siec X0) \wedge (l1_e_siec X0))) \Rightarrow \\ & ((k3_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 \\ & (u2_e_siec X0)))) (k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 \\ & X0))) = k4_xboole_0 (u2_e_siec X0) (k4_relat_1 (u1_struct_0 X0))) \wedge \\ & (k3_relat_1 (k4_relat_1 (k4_xboole_0 (u1_struct_0 X0) (k10_xtuple_0 \\ & (u1_e_siec X0)))) (k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 \\ & X0))) = k4_xboole_0 (u1_e_siec X0) (k4_relat_1 (u1_struct_0 X0)))) \end{aligned}$$