

t49_exchsort

(TMZcBoREkgjVwse6eBRFcoLte5Q88xCLtYK)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v16_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_exchsort : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_exchsort : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v2_struct_0 X2) \wedge ((v3_orders_2 \\ & X2) \wedge ((v4_orders_2 X2) \wedge ((v5_orders_2 X2) \wedge ((v16_waybel_0 X2) \wedge \\ & (l1_orders_2 X2)))))) \Rightarrow (\forall X3. ((v1_relat_1 X3) \wedge ((v5_relat_1 \\ & X3 (u1_struct_0 X2)) \wedge ((v1_funct_1 X3) \wedge (v1_exchsort X3)))) \Rightarrow (\\ & (k4_tarski X0 X1 \in k6_exchsort X2 X3) \Leftrightarrow ((X0 \in k9_xtuple_0 X3) \wedge ((X1 \in \\ & k9_xtuple_0 X3) \wedge ((X0 \in X1) \wedge (r2_orders_2 X2 (k7_partfun1 (u1_struct_0 \\ & X2) X3 X1) (k7_partfun1 (u1_struct_0 X2) X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (\neg X1 \in X0) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v2_struct_0 X2) \wedge (v3_orders_2 \\ & X2) \wedge (v4_orders_2 X2) \wedge (v5_orders_2 X2) \wedge (v16_waybel_0 X2) \wedge \\ & (l1_orders_2 X2))) \Rightarrow (\forall X3. ((v1_relat_1 X3) \wedge (v5_relat_1 \\ & X3 (u1_struct_0 X2)) \wedge (v1_funct_1 X3) \wedge (v1_exhsort X3))) \Rightarrow (\\ & \neg(k4_tarski X0 X1 \in k6_exhsort X2 X3) \wedge (k4_tarski X1 X0 \in k6_exhsort \\ & X2 X3)) \end{aligned}$$