

t82_exchsort (TMLQqPpxqB- vcNJ7fQUQUQuGiqqjsEDYZGv5)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_exchsort : \iota \Rightarrow o$ be given. Let $m1_exchsort : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_exchsort X0))) \Rightarrow \\ (\forall X1.(m1_exchsort X1 X0) \Rightarrow ((k9_xtuple_0 X1 = k9_xtuple_0 \\ X0) \wedge (k10_xtuple_0 X1 = k10_xtuple_0 X0))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_exchsort X0))) \Rightarrow \\ (\forall X1.(m1_exchsort X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge (v1_exchsort X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k1_funct_2 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow (\exists X4. ((v1_relat_1 X4) \wedge (v1_funct_1 X4)) \wedge ((X3 = \\ X4) \wedge ((k9_xtuple_0 X4 = X0) \wedge (r1_tarski (k10_xtuple_0 X4) X1)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_exchsort X0))) \Rightarrow \\ (\forall X1.(m1_exchsort X1 X0) \Rightarrow (X1 \in k1_funct_2 (k9_xtuple_0 \\ X0) (k10_xtuple_0 X0))) \end{aligned}$$