

t36_exchsort (TML-
SKcfM9H8d4B99XDVtFk81URrQr9y2vAU)

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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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. k9_xtuple_0 (k10_funct_7 X0 X1 X2) = k9_xtuple_0 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow (\neg(X0 \neq X1) \wedge ((X0 \neq X2) \wedge (k1_funct_1 (k10_funct_7 X3 X1 X2) X0 \neq k1_funct_1 X3 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (((X0 \in k9_xtuple_0 X2) \wedge (X1 \in k9_xtuple_0 X2)) \Rightarrow (k1_funct_1 (k10_funct_7 X2 X0 X1) X1 = k1_funct_1 X2 X0)) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 X1) \wedge (\forall X2. (X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 X1 X2))) \Rightarrow (X0 = X1))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (((X0 \in k9_xtuple_0 X2) \wedge (X1 \in k9_xtuple_0 X2)) \Rightarrow (k1_funct_1 (k10_funct_7 X2 X0 X1) X0 = k1_funct_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k10_funct_7 X0 X1 X2))\wedge(v1_funct_1 (k10_funct_7 X0 X1 X2))) \quad (6)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_exhsort X2)))\Rightarrow(((X0 \in k9_xtuple_0 X2)\wedge(X1 \in k9_xtuple_0 X2))\Rightarrow(k10_funct_7 (k10_funct_7 X2 X0 X1) X0 X1 = X2))$$