t23_exchsort (TMY9FTaVUnoiWYx2xENJm7DR9Xcs4qHET7S)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. 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 $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_exchsort : \iota \Rightarrow \iota$ be given. Let $k2\_exchsort : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k2\_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k3\_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k3\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((k6\_subset\_1\ X0\ X1 \neq k1\_xboole\_0) \Rightarrow ((k2\_ordinal2\ (k6\_subset\_1\ X0\ X1) = X1) \wedge ((k3\_ordinal2\ (k6\_subset\_1\ X0\ X1) = X0) \wedge (k3\_tarski\ (k6\_subset\_1\ X0\ X1) = k3\_tarski\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (k1\_exchsort\ X0 = k2\_ordinal2\ (k9\_xtuple\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (k2\_exchsort\ X0 = k3\_ordinal2\ (k9\_xtuple\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_relat\_1\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (k9\_xtuple\_0\ X0)) \tag{4}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{5}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_exchsort\ X2))) \Rightarrow ((k9\_xtuple\_0\ X2 = k6\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X2) \vee ((k1\_exchsort\ X2 = X1) \wedge (k2\_exchsort\ X2 = X0))))))$$