t12_wellord1 (TMbiNH3mwopMZDxJq2igiDPjjFdZ1sRhwvp)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k1\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (k10\_xtuple\_0\ (k6\_relat\_1\ X0\ X1) = k3\_xboole\_0\ (k10\_xtuple\_0\ X1)\ X0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (r1\_tarski\ (k10\_xtuple\_0\ (k5\_relat\_1\ X1\ X0))\ (k10\_xtuple\_0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (k9\_xtuple\_0\ (k5\_relat\_1\ X1\ X0) = k3\_xboole\_0\ (k9\_xtuple\_0\ X1)\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee(X0 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow(k2\_wellord1\ X1\ X0 = k6\_relat\_1\ X0\ (k5\_relat\_1\ X1\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow(k2\_wellord1\ X1\ X0 = k5\_relat\_1\ (k6\_relat\_1\ X0\ X1)\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow(r1\_tarski\ (k9\_xtuple\_0\ (k6\_relat\_1\ X0\ X1))\ (k9\_xtuple\_0\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow(v1\_relat\_1\ (k6\_relat\_1\ X0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k2\_wellord1\ X0\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(k1\_relat\_1\ X0 = k2\_xboole\_0\ (k9\_xtuple\_0\ X0)\ (k10\_xtuple\_0\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \tag{16}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2)\Rightarrow((X0 \in k1\_relat\_1\ (k2\_wellord1\ X2\ X1))\Rightarrow((X0 \in k1\_relat\_1\ X2)\wedge(X0 \in X1)))$$