t7_wellord2 (TMF92aWWJun1qZzbHjFVViwuwu22ZnJiMoZ)

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Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_wellord2 : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k1\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski\ X0\ X1 \in k2\_zfmisc\_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2) \Rightarrow ((k4\_tarski\ X0\ X1 \in X2) \Rightarrow ((X0 \in k1\_relat\_1\ X2) \wedge (X1 \in k1\_relat\_1\ X2))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k2\_wellord1\ X0\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.v1\_relat\_1\ (k1\_wellord2\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.k2\_wellord1\ X0\ X1 = k3\_xboole\_0\ X0\ (k2\_zfmisc\_1\ X1\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(v1\_relat\_1\ X1)\Rightarrow((X0 = X1)\Leftrightarrow(\forall X2.\forall X3.(k4\_tarski\ X2\ X3 \in X0)\Leftrightarrow(k4\_tarski\ X2\ X3 \in X1)))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow((X1 = k1\_wellord2\ X0)\Leftrightarrow((k1\_relat\_1\ X1 = X0)\wedge(\forall X2.\forall X3.((X2 \in X0)\wedge(X3 \in X0))\Rightarrow((k4\_tarski\ X2\ X3 \in X1)\Leftrightarrow(r1\_tarski\ X2\ X3))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0\ X0\ X1 = k3\_xboole\_0\ X1\ X0 \tag{13}$$

Theorem 1

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Rightarrow(k2\_wellord1\ (k1\_wellord2\ X1)\ X0 = k1\_wellord2\ X0)$$