t9_classes2 (TMNpu-UCjr9b5ET8Ush6D3UuKRqMd1tkbKRP)

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Let $v2\_classes1 : \iota \Rightarrow o$ be given. Let $k2\_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_classes1 : \iota \Rightarrow o$ be given. Let $r2\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_ordinal1 : \iota \Rightarrow o$ be given. Let $k9\_setfam\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $v2\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.r1\_tarski\ (k2\_ordinal1\ X0)\ X0 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_classes1\ X0) \wedge (X1 \in X0)) \Rightarrow ((\neg r2\_tarski\ X1\ X0) \wedge (k1\_card\_1\ X1 \in k1\_card\_1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(\forall X1.(X1 \in X0) \Rightarrow ((v3\_ordinal1\ X1) \wedge (r1\_tarski\ X1\ X0))) \Rightarrow (v3\_ordinal1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((r1\_ordinal1\ X0\ X1) \vee (X1 \in X0))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r2\_wellord2\ X0\ X1) \wedge (r2\_wellord2\ X1\ X2)) \Rightarrow (r2\_wellord2\ X0\ X2) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r2\_wellord2\ X0\ X1) \Rightarrow (r2\_wellord2\ X1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(r2\_wellord2\ X0\ X1)\Leftrightarrow(r2\_tarski\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k2\_ordinal1\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow ((X2 \in X0)\wedge(v3\_ordinal1\ X2))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_ordinal1\ X0)\Leftrightarrow(\forall X1.(X1 \in X0)\Rightarrow(r1\_tarski\ X1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.(v2\_classes1\ X0)\Leftrightarrow((v1\_classes1\ X0)\wedge((\forall X1.(X1 \in X0)\Rightarrow(k9\_setfam\_1\ X1 \in X0))\wedge(\forall X1.\neg(r1\_tarski\ X1\ X0)\wedge((\neg r2\_tarski\ X1\ X0)\wedge(\neg X1 \in X0))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_card\_1\ X1)\Rightarrow((X1 = k1\_card\_1\ X0)\Leftrightarrow(r2\_wellord2\ X0\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_classes1\ X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in X0)\wedge (r1\_tarski\ X2\ X1))\Rightarrow(X2 \in X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0)\Leftrightarrow(\exists X1.(v3\_ordinal1\ X1)\wedge((X0 = X1)\wedge(\forall X2.(v3\_ordinal1\ X2)\Rightarrow((r2\_wellord2\ X2\ X1)\Rightarrow(r1\_ordinal1\ X1\ X2))))) \tag{15}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v3\_ordinal1\ X1)) \tag{16}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow((v1\_ordinal1\ X0)\wedge(v2\_ordinal1\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.(v2\_classes1\ X0)\Rightarrow(v1\_classes1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \tag{19}$$

Theorem 1 $\forall X0.(v2\_classes1\ X0)\Rightarrow(k2\_ordinal1\ X0 = k1\_card\_1\ X0)$.