

t37_wellord1
(TMdDVeHAvndoPxGsLoJJu4L8U18b8fB8J7c)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r3_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(k9_xtuple_0 (k4_relat_1 X0) = X0) \wedge (k10_xtuple_0 (k4_relat_1 X0) = X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (k1_funct_1 (k4_relat_1 X1) X0 = X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((k4_tarski X0 X1 \in X2) \Rightarrow ((X0 \in k1_relat_1 X2) \wedge (X1 \in k1_relat_1 X2))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0)) \wedge (v2_funct_1 (k4_relat_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0)) \wedge (v1_funct_1 (k4_relat_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.v1_relat_1 (k4_relat_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r3_wellord1 X0 X1 X2) \Leftrightarrow ((\\ & k9_xtuple_0 X2 = k1_relat_1 X0) \wedge ((k10_xtuple_0 X2 = k1_relat_1 \\ & X1) \wedge ((v2_funct_1 X2) \wedge (\forall X3.\forall X4.(k4_tarski X3 X4 \in \\ & X0) \Leftrightarrow ((X3 \in k1_relat_1 X0) \wedge ((X4 \in k1_relat_1 X0) \wedge (k4_tarski (k1_funct_1 \\ & X2 X3) (k1_funct_1 X2 X4) \in X1)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\forall X0.(v1_relat_1 X0) \Rightarrow (r3_wellord1 X0 X0 (k4_relat_1 (k1_relat_1 X0)))$$