

t39_orders_1

(TMFDftKuYph9Z89mMSFCFUMgpCUqFVRydYB)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r3_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_orders_1 : \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_orders_1 : \iota \Rightarrow o$ be given. Let $r1_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_relat_2 : \iota \Rightarrow o$ be given. Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r8_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r2_orders_1 X0 X1) \Rightarrow (v2_orders_1 (k2_wellord1 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r3_orders_1 X0 X1) \Rightarrow (r1_orders_1 X0 X1) \wedge (r2_orders_1 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r6_relat_2 X0 X1) \Rightarrow (v6_relat_2 (k2_wellord1 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0) \Rightarrow (v1_relat_1 (k2_wellord1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r3_orders_1 X0 X1) \Leftrightarrow ((r1_relat_2 X0 X1) \wedge ((r8_relat_2 X0 X1) \wedge ((r4_relat_2 X0 X1) \wedge (r6_relat_2 X0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v3_orders_1 X0) \Leftrightarrow ((v1_relat_2 X0) \wedge ((v8_relat_2 X0) \wedge ((v4_relat_2 X0) \wedge (v6_relat_2 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v2_orders_1 X0) \Leftrightarrow ((v1_relat_2 X0) \wedge ((v8_relat_2 X0) \wedge (v4_relat_2 X0)))) \quad (7)$$

Theorem 1

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r3_orders_1 X0 X1) \Rightarrow (v3_orders_1 (k2_wellord1 X0 X1)))$$