

t25\_wellord1 (TMPPkG-  
CYp1vDyQAcqAHtXusXtyge6Wre973)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v2\_wellord1 : \iota \Rightarrow o$  be given. Let  $k2\_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_wellord1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v6\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((v1\_wellord1 X1) \Rightarrow (v1\_wellord1 (k2\_wellord1 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((v4\_relat\_2 X1) \Rightarrow (v4\_relat\_2 (k2\_wellord1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((v8\_relat\_2 X1) \Rightarrow (v8\_relat\_2 (k2\_wellord1 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((v6\_relat\_2 X1) \Rightarrow (v6\_relat\_2 (k2\_wellord1 X1 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((v1\_relat\_2 X1) \Rightarrow (v1\_relat\_2 (k2\_wellord1 X1 X0))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k2\_wellord1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow ((v2\_wellord1 X0) \Leftrightarrow ((v1\_relat\_2 X0) \wedge ((v8\_relat\_2 X0) \wedge ((v4\_relat\_2 X0) \wedge ((v6\_relat\_2 X0) \wedge (v1\_wellord1 X0)))))) \quad (7)$$

**Theorem 1**

$$\forall X0.\forall X1.(v1\_relat\_1\ X1)\Rightarrow((v2\_wellord1\ X1)\Rightarrow(v2\_wellord1\ (k2\_wellord1\ X1\ X0)))$$