

## t18\_ordinal2

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k3\_ordinal2 : \iota \Rightarrow \iota$  be given. Let  $k2\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (k2\_ordinal1 X0 = X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow (r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1 X1) \Rightarrow ((X1 = k3\_ordinal2 X0) \Leftrightarrow ((r1\_tarski (k2\_ordinal1 X0) X1) \wedge (\forall X2.(v3\_ordinal1 X2) \Rightarrow ((r1\_tarski (k2\_ordinal1 X0) X2) \Rightarrow (r1\_ordinal1 X1 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (4)$$

**Theorem 1**  $\forall X0.(v3\_ordinal1 X0) \Rightarrow (k3\_ordinal2 X0 = X0)$ .