

## t30\_classes2

(TMZc9weXWmY8c6BBh4vgU5VdPE5Cv1LjuJ9)

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Let  $v2\_classes1 : \iota \Rightarrow o$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_classes1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_classes1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v3\_ordinal1 X2) \Rightarrow (((r1\_tarski X0 X1) \wedge (X1 \in k4\_classes1 X2)) \Rightarrow (X0 \in k4\_classes1 X2)) \quad (2)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (k4\_classes1 X0 \in k4\_classes1 X1))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v2\_classes1 X0) \wedge ((v1\_ordinal1 X0) \wedge (X1 \in X0))) \Rightarrow (k6\_classes1 X1 \in X0) \quad (4)$$

Assume the following.

$$\forall X0.v3\_ordinal1 (k6\_classes1 X0) \quad (5)$$

Assume the following.

$$\forall X0.v1\_card\_1 (k1\_card\_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k2\_ordinal1 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow ((X2 \in X0) \wedge (v3\_ordinal1 X2))) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v3\_ordinal1 X1) \Rightarrow ((X1 = k6\_classes1 X0) \Leftrightarrow \\ & ((r1\_tarski X0 (k4\_classes1 X1)) \wedge (\forall X2. (v3\_ordinal1 X2) \Rightarrow \\ & ((r1\_tarski X0 (k4\_classes1 X2)) \Rightarrow (r1\_ordinal1 X1 X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (9)$$

Assume the following.

$$\forall X0. (v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (10)$$

**Theorem 1**

$$\forall X0. ((v2\_classes1 X0) \wedge (v1\_ordinal1 X0)) \Rightarrow (r1\_tarski X0 (k4\_classes1 (k1\_card\_1 X0)))$$