

## t53\_classes2

(TMH7g6r3TV4tkxZq5hv9XbdJy5R8BLeF5Eh)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_classes2 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_classes1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (v1\_classes2 X1)) \Rightarrow (\neg(\neg X0 \in X1) \wedge ((X0 \neq X1) \wedge \\ & (\neg X1 \in X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1\_ordinal1 X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (r1\_tarski X1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_classes2 X0) \Rightarrow ((v1\_ordinal1 X0) \wedge (v2\_classes1 X0)) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (v1\_classes2 X1)) \Rightarrow ((r1\_tarski X0 X1) \vee (X1 \in \\ & X0))) \end{aligned}$$