

## t53\_classes1

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Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_classes1 : \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Rightarrow (r1\_tarski (k3\_tarski X0) (k3\_tarski X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_ordinal1 X0) \Rightarrow (r1\_tarski (k3\_tarski X0) X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1 : \iota \Rightarrow o. ((X1 k1\_xboole\_0) \wedge (\forall X2. (v7\_ordinal1 X2) \Rightarrow ((X1 X2) \Rightarrow (X1 (k1\_ordinal1 X2))))) \Rightarrow (X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (X1 = k5\_classes1 X0) &\Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow \\ &(\exists X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \wedge (\exists X4. ( \\ &m1\_subset\_1 X4 k4\_ordinal1) \wedge ((X2 \in k1\_funct\_1 X3 X4) \wedge ((k9\_xtuple\_0 \\ &X3 = k4\_ordinal1) \wedge ((k1\_funct\_1 X3 k1\_xboole\_0 = X0) \wedge (\forall X5. \\ &(v7\_ordinal1 X5) \Rightarrow (k1\_funct\_1 X3 (k1\_ordinal1 X5) = k3\_tarski ( \\ &k1\_funct\_1 X3 X5)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.k1\_ordinal1 X0 = k2\_xboole\_0 X0 (k1\_tarSKI X0) \quad (8)$$

**Theorem 1**

$$\forall X0.\forall X1.((r1\_tarSKI X0 X1)\wedge(v1\_ordinal1 X1))\Rightarrow(r1\_tarSKI (k5\_classes1 X0) X1)$$