

## t132\_xxreal\_1

(TMb7nmh6ZeXxRwR26hWuL7qC5hHaqgCFPBt)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. (v1\_xxreal\_0 \\ & X2) \Rightarrow (\neg (X0 \in k3\_xxreal\_1 X1 X2) \wedge (\neg X0 \in k4\_xxreal\_1 X1 X2) \wedge (X0 \neq X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_xxreal\_0 X0) \Rightarrow (\forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k3\_xxreal\_1 X1 X2) \Leftrightarrow ((\neg r1\_xxreal\_0 X0 X1) \wedge \\ & (r1\_xxreal\_0 X0 X2))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. (v1\_xxreal\_0 \\ & X2) \Rightarrow ((X0 \in k4\_xxreal\_1 X1 X2) \Rightarrow ((X0 \in k3\_xxreal\_1 X1 X2) \wedge (X0 \neq X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (r1\_xxreal\_0 X0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (7)$$

**Theorem 1**

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((\neg r1\_xxreal\_0 X1 X0) \Rightarrow (k3\_xxreal\_1 X0 X1 = k2\_xboole\_0 (k4\_xxreal\_1 X0 X1) (k1\_tarski X1))))$$