

# t114\_member\_1 (TMPGN- StdH2sYpk71BzFmGmseumEW9tUTL8i)

October 27, 2020

Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k14\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_member\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_xxreal\_3 : \iota \Rightarrow \iota$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (\forall X3.(v1\_xxreal\_0 X3) \Rightarrow (k12\_member\_1 \\ & (k2\_tarski X0 X1) (k2\_tarski X2 X3) = k2\_enumset1 (k4\_xxreal\_3 X0 \\ & X2) (k4\_xxreal\_3 X0 X3) (k4\_xxreal\_3 X1 X2) (k4\_xxreal\_3 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (k6\_member\_1 \\ & (k2\_tarski X0 X1) = k2\_tarski (k5\_xxreal\_3 X0) (k5\_xxreal\_3 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & v2\_membered (k2\_tarski X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (v1\_xxreal\_0 (k5\_xxreal\_3 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (k6\_xxreal\_3 \\ & X0 X1 = k4\_xxreal\_3 X0 (k5\_xxreal\_3 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2\_membered X0) \Rightarrow (\forall X1.(v2\_membered X1) \Rightarrow (k14\_member\_1 \\ & X0 X1 = k12\_member\_1 X0 (k6\_member\_1 X1))) \end{aligned} \quad (6)$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (\forall X3.(v1\_xxreal\_0 X3) \Rightarrow (k14\_member\_1 \\ & (k2\_tarski X0 X1) (k2\_tarski X2 X3) = k2\_enumset1 (k6\_xxreal\_3 X0 \\ & X2) (k6\_xxreal\_3 X0 X3) (k6\_xxreal\_3 X1 X2) (k6\_xxreal\_3 X1 X3)))))) \end{aligned}$$