

t190\_member\_1  
(TMT7EZhgH4KZ24XPtwNLedJfNMi7R8DeRVq)

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Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k22\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k12\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_numbers : \iota$  be given. Let  $k3\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v2\_membered X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v2\_membered (k22\_member\_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (v2\_membered (k1\_tarski X0)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v2\_membered X0) \Rightarrow (v2\_membered (k4\_xboole\_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. m1\_subset\_1 (k6\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. (v2\_membered X0) \Rightarrow (\forall X1. (v2\_membered X1) \Rightarrow (k12\_member\_1 \\ X0 X1 = \text{ReplSep2} (\text{toset} (\lambda X2 : \iota. m1\_subset\_1 X2 k7\_numbers)) \\ (\lambda X2 : \iota. \text{toset} (\lambda X3 : \iota. m1\_subset\_1 X3 k7\_numbers)) ( \\ \lambda X2 : \iota. \lambda X3 : \iota. (X2 \in X0) \wedge (X3 \in X1)) (\lambda X2 : \iota. \lambda X3 : \\ \iota. k3\_member\_1 X2 X3))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2. (v1\_xreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4\_xboole\_0\ X0\ X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \quad (9)$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (k22\_member\_1\ X0\ X1 = k12\_member\_1\ (k1\_tarski\ X1)\ X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0) \wedge (v2\_membered\ X1)) \Rightarrow (k12\_member\_1\ X0\ X1 = k12\_member\_1\ X1\ X0) \quad (11)$$

**Theorem 1**

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v2\_membered\ X1) \Rightarrow (\forall X2. (v1\_xreal\_0\ X2) \Rightarrow (r1\_tarski\ (k6\_subset\_1\ (k22\_member\_1\ X0\ X2)\ (k22\_member\_1\ X1\ X2))\ (k22\_member\_1\ (k6\_subset\_1\ X0\ X1)\ X2))))$$