

t57\_xxreal\_2 (TMSTbE-  
wFmG46CGCx7Vmu1HXhqodqjiaqa62)

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Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v4\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  be given. Let  $k1\_xxreal\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v2\_membered X0) \wedge ((\neg v1\_xboole\_0 X0) \wedge (v4\_xxreal\_2 \\ X0))) \Rightarrow (\neg (X0 \neq k1\_tarski k2\_xxreal\_0) \wedge (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow (\neg X1 \in X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\neg \\ (X0 \in k1\_numbers) \wedge ((r1\_xxreal\_0 X1 X0) \wedge ((\neg X1 \in k1\_numbers) \wedge (X1 \neq \\ k2\_xxreal\_0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\neg (X0 \in k1\_numbers) \wedge (r1\_xxreal\_0 \\ X0 k2\_xxreal\_0)) \quad (3)$$

Assume the following.

$$\forall X0.(v2\_membered X0) \Rightarrow (v1\_xxreal\_0 (k1\_xxreal\_2 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2\_membered X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\ X1 = k1\_xxreal\_2 X0) \Leftrightarrow ((m1\_xxreal\_2 X1 X0) \wedge (\forall X2.(m1\_xxreal\_2 \\ X2 X0) \Rightarrow (r1\_xxreal\_0 X1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2\_membered X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\ m1\_xxreal\_2 X1 X0) \Leftrightarrow (\forall X2.(v1\_xxreal\_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0 \\ X2 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Leftrightarrow (X0 \in k1\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v2\_membered X0) \Rightarrow ((v4\_xxreal\_2 X0) \Leftrightarrow (\exists X1.(v1\_xreal\_0 X1) \wedge (m1\_xxreal\_2 X1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (10)$$

**Theorem 1**

$$\forall X0.((v2\_membered X0) \wedge (\neg v1\_xboole\_0 X0)) \Rightarrow ((v4\_xxreal\_2 X0) \Rightarrow ((X0 = k1\_tarski k2\_xxreal\_0) \vee (k1\_xxreal\_2 X0 \in k1\_numbers)))$$