

t46\_xxreal\_3  
(TMQ53ZRFdTqN45R7Xy34iC5pCb2y5yP6xZB)

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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  $k6\_numbers : \iota$  be given. Let  $k3\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (k1\_xxreal\_3 X0 k6\_numbers = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xxreal\_0 X2) \Rightarrow (\neg(\neg r1\_xxreal\_0 X1 X0) \wedge ((\neg r1\_xxreal\_0 X2 X1) \wedge \\ (\neg X1 \in k1\_numbers)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xxreal\_0 X2) \Rightarrow ((v1\_xreal\_0 X0) \Rightarrow ((r1\_xxreal\_0 (k1\_xxreal\_3 \\ X1 X0) X2) \Leftrightarrow (r1\_xxreal\_0 X1 (k3\_xxreal\_3 X2 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\ v1\_xreal\_0 X0) \Rightarrow ((k1\_xxreal\_3 (k3\_xxreal\_3 X1 X0) X0 = X1) \wedge (k3\_xxreal\_3 \\ (k1\_xxreal\_3 X1 X0) X0 = X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow(v1\_xxreal\_0 (k3\_xxreal\_3 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0)\Leftrightarrow(X0 \in k1\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow(k1\_xxreal\_3 X0 X1 = k1\_xxreal\_3 X1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (11)$$

**Theorem 1**

$$\forall X0.(v1\_xxreal\_0 X0)\Rightarrow(\forall X1.(v1\_xxreal\_0 X1)\Rightarrow(\neg(\neg r1\_xxreal\_0 X0 k6\_numbers)\wedge(\neg r1\_xxreal\_0 X1 X0)\wedge(r1\_xxreal\_0(k3\_xxreal\_3 X1 X0) k6\_numbers))))$$