

# t79\_xxreal\_2 (TMTopQNKeD- MQDu29Q3xoztfEv4vChgsJ8Cd)

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Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v6\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xxreal\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1\_xboole\_0 X0) \wedge ((X0 \neq X1) \wedge (v1\_xboole\_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((v2\_membered X0) \wedge ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xxreal\_2 X0) \wedge ((\neg v2\_xxreal\_2 X0) \wedge (v6\_xxreal\_2 X0))))) \Rightarrow (X0 = k4\_xxreal\_1 (k2\_xxreal\_2 X0) (k1\_xxreal\_2 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v2\_membered X0) \Rightarrow ((\neg v1\_xboole\_0 X0) \Leftrightarrow (r1\_xxreal\_0 (k2\_xxreal\_2 X0) (k1\_xxreal\_2 X0))) \quad (3)$$

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.

$$\forall X0. (v1\_xxreal\_0 X0) \Rightarrow (v1\_xboole\_0 (k4\_xxreal\_1 X0 X0)) \quad (5)$$

Assume the following.

$$v1\_xxreal\_0 k2\_xxreal\_0 \quad (6)$$

Assume the following.

$$\forall X0. (v2\_membered X0) \Rightarrow (v1\_xxreal\_0 (k2\_xxreal\_2 X0)) \quad (7)$$

Assume the following.

$$\forall X0. (v2\_membered X0) \Rightarrow (v1\_xxreal\_0 (k1\_xxreal\_2 X0)) \quad (8)$$

**Theorem 1**

$$\forall X0.((v2\_membered\ X0)\wedge((\neg v1\_xreal\_2\ X0)\wedge((\neg v2\_xreal\_2\ X0)\wedge(v6\_xreal\_2\ X0))))\Rightarrow(\exists X1.(v1\_xreal\_0\ X1)\wedge(\exists X2.(v1\_xreal\_0\ X2)\wedge(r1\_xreal\_0\ X1\ X2)\wedge(X0 = k4\_xreal\_1\ X1\ X2))))$$