

t222\_xxreal\_1

(TMK645N2rQdxQJ9CJ2eZG1m9KYqQDr3B6b7)

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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  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((\neg r1\_xxreal\_0 X1 X0) \Rightarrow (k1\_xxreal\_1 X1 X0 = k1\_xboole\_0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0) \Rightarrow (X0 = X1))) \quad (2)$$

Assume the following.

$$\forall X0.k2\_xboole\_0 X0 k1\_xboole\_0 = X0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X0 = X0 \quad (4)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (5)$$

**Theorem 1**

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k1\_xxreal\_1 X0 X1 = k2\_xboole\_0 (k1\_xxreal\_1 X0 X1) (k1\_xxreal\_1 X1 X0))))$$