

l128_xxreal_3

(TMUL4mX1Ht8M28LYVdgBmExYKVx1KZypE4s)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 = k2_xxreal_3 X1) \Rightarrow (k4_xxreal_3 X2 (k1_xxreal_3 \\ & X0 X1) = k1_xxreal_3 (k4_xxreal_3 X2 X0) (k4_xxreal_3 X2 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$k2_xxreal_3 k1_xxreal_0 = k2_xxreal_0 \quad (2)$$

Assume the following.

$$k2_xxreal_3 k2_xxreal_0 = k1_xxreal_0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(\neg X0 \in k1_numbers) \wedge ((X0 \neq k1_xxreal_0) \wedge (X0 \neq k2_xxreal_0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k4_xxreal_3 \\ & X0 (k1_xxreal_3 X1 X2) = k1_xxreal_3 (k4_xxreal_3 X0 X1) (k4_xxreal_3 \\ & X0 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (k4_xxreal_3 X0 (k1_xxreal_3 X1 X1) = k1_xxreal_3 (k4_xxreal_3 X0 X1) (k4_xxreal_3 X0 X1))) \quad (7)$$

Assume the following.

$$v2_xxreal_0 k1_xxreal_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((v1_xxreal_0 (k4_xxreal_3 X0 X1)) \wedge (v1_xxreal_0 (k4_xxreal_3 X0 X1))) \quad (9)$$

Assume the following.

$$v1_xxreal_0 k2_xxreal_0 \quad (10)$$

Assume the following.

$$v1_xxreal_0 k1_xxreal_0 \quad (11)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((v1_xxreal_0 (k2_xxreal_3 X0)) \wedge (v3_xxreal_0 (k2_xxreal_3 X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v1_xxreal_0 (k4_xxreal_3 X0 X1)) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (v1_xxreal_0 (k2_xxreal_3 X0)) \quad (14)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (k1_xxreal_3 X0 X1 = k1_xxreal_3 X1 X0) \quad (16)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v3_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v2_xxreal_0 X0))) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xxreal_0 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((v1_xxreal_0 X0) \Rightarrow ((v1_xxreal_0 X1) \vee (k4_xxreal_3 \\ & X0 (k1_xxreal_3 X1 X2) = k1_xxreal_3 (k4_xxreal_3 X0 X1) (k4_xxreal_3 \\ & X0 X2)))))) \end{aligned}$$