

t12_quatern3
(TMQfec7PrJGvKVZt74MpLpnTtLwXoPZT7ov)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $k27_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_quaterni : \iota \Rightarrow \iota$ be given. Let $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_quaterni : \iota \Rightarrow \iota$ be given. Let $k18_quaterni : \iota \Rightarrow \iota$ be given. Let $k19_quaterni : \iota \Rightarrow \iota$ be given. Let $k20_quaterni : \iota \Rightarrow \iota$ be given. Let $k18_quatern2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k32_quaterni (k27_quaterni X0 X0) = k32_quaterni (k27_quaterni X0 (k31_quaterni X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k32_quaterni (k27_quaterni X0 X0) = k7_real_1 (k7_real_1 (k7_real_1 (k5_square_1 (k17_quaterni X0)) (k5_square_1 (k18_quaterni X0))) (k5_square_1 (k19_quaterni X0))) (k5_square_1 (k20_quaterni X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k18_quatern2 X0 X0 = k5_square_1 (k3_quatern2 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k5_square_1 (k3_quatern2 X0) = k7_real_1 (k7_real_1 (k7_real_1 (k5_square_1 (k17_quaterni X0)) (k5_square_1 (k18_quaterni X0))) (k5_square_1 (k19_quaterni X0))) (k5_square_1 (k20_quaterni X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k3_quatern2 X0 = k32_quaterni X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k18_quatern2 X0 X1) k1_quaterni) \quad (6)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (\forall X1.(v1_quaterni\ X1) \Rightarrow (k18_quatern2\ X0\ X1 = k27_quaterni\ X0\ (k31_quaterni\ X1))) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_quaterni) \Rightarrow (v1_quaterni\ X0) \quad (8)$$

Theorem 1

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (k5_square_1\ (k3_quatern2\ X0) = k3_quatern2\ (k27_quaterni\ X0\ (k31_quaterni\ X0)))$$