

t47_quatern3
(TMVr57TsxqDojQto8Ctuf7wb9KG94wHUq3T)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k8_quatern2 : \iota \Rightarrow \iota$ be given. Let $k31_quaterni : \iota \Rightarrow \iota$ be given. Let $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $k28_quaterni : \iota \Rightarrow \iota$ be given. Let $k17_quaterni : \iota \Rightarrow \iota$ be given. Let $k18_quaterni : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k19_quaterni : \iota \Rightarrow \iota$ be given. Let $k20_quaterni : \iota \Rightarrow \iota$ be given. Let $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k32_quaterni (k28_quaterni X0) = k32_quaterni X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow ((k17_quaterni (k31_quaterni X0) = k17_quaterni X0) \wedge ((k18_quaterni (k31_quaterni X0) = k1_real_1 (k18_quaterni X0)) \wedge ((k19_quaterni (k31_quaterni X0) = k1_real_1 (k19_quaterni X0)) \wedge (k20_quaterni (k31_quaterni X0) = k1_real_1 (k20_quaterni X0)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k31_quaterni X0 = k6_quaterni (k17_quaterni X0) (k1_real_1 (k18_quaterni X0)) (k1_real_1 (k19_quaterni X0)) (k1_real_1 (k20_quaterni X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow ((k17_quaterni (k28_quaterni X0) = k1_real_1 (k17_quaterni X0)) \wedge ((k18_quaterni (k28_quaterni X0) = k1_real_1 (k18_quaterni X0)) \wedge ((k19_quaterni (k28_quaterni X0) = k1_real_1 (k19_quaterni X0)) \wedge (k20_quaterni (k28_quaterni X0) = k1_real_1 (k20_quaterni X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (k8_quatern2\ (k28_quaterni\ X0) = k28_quaterni\ (k8_quatern2\ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni\ X0) \Rightarrow & ((k17_quaterni\ (k8_quatern2\ X0) = k10_real_1\ (k17_quaterni\ X0)\ (k5_square_1\ (k3_quatern2\ X0))) \wedge \\ & ((k18_quaterni\ (k8_quatern2\ X0) = k1_real_1\ (k10_real_1\ (k18_quaterni\ X0)\ (k5_square_1\ (k3_quatern2\ X0)))) \wedge \\ & ((k19_quaterni\ (k8_quatern2\ X0) = k1_real_1\ (k10_real_1\ (k19_quaterni\ X0)\ (k5_square_1\ (k3_quatern2\ X0)))) \wedge \\ & ((k20_quaterni\ (k8_quatern2\ X0) = k1_real_1\ (k10_real_1\ (k20_quaterni\ X0)\ (k5_square_1\ (k3_quatern2\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (X0 = k6_quaterni\ (k17_quaterni\ X0)\ (k18_quaterni\ X0)\ (k19_quaterni\ X0)\ (k20_quaterni\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (k3_quatern2\ X0 = k32_quaterni\ X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (m1_subset_1\ (k8_quatern2\ X0)\ k1_quaterni) \quad (10)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (m1_subset_1\ (k31_quaterni\ X0)\ k1_quaterni) \quad (11)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (m1_subset_1\ (k28_quaterni\ X0)\ k1_quaterni) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_quaterni) \Rightarrow (v1_quaterni\ X0) \quad (13)$$

Theorem 1

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (k8_quatern2\ (k31_quaterni\ X0) = k31_quaterni\ (k8_quatern2\ X0))$$