

t40_quatern3
(TMa7sLRWjC6U45byqzvoctaC5iMmsPyYNJY)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $k29_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (r1_xreal_0 (k17_complex1 (k6_xcmplx_0 (k32_quaterni X0) (k32_quaterni X1)))) (k32_quaterni (k29_quaterni X0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k32_quaterni (k29_quaterni X0 X1) = k32_quaterni (k29_quaterni X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k3_quatern2 X0 = k32_quaterni X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (m1_subset_1 (k3_quatern2 X0) k1_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (v1_xreal_0 (k32_quaterni X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k29_quaterni X0 X1) k1_quaterni) \quad (7)$$

Assume the following.

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

Theorem 1

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (\forall X1.(v1_quaterni\ X1) \Rightarrow (r1_xxreal_0 \\ (k17_complex1\ (k9_real_1\ (k3_quatern2\ X0)\ (k3_quatern2\ X1))) \\ (k3_quatern2\ (k29_quaterni\ X1\ X0))))$$