

t12_quatern2

(TMVJTwcqXYxv6i6z2QKLjoiAbAkLW8d9Ss2)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k27_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_quatern2 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_quaterni : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow ((v1_xreal_0 X0) \Rightarrow ((k17_quaterni \\ X0 = X0) \wedge ((k18_quaterni X0 = k6_numbers) \wedge ((k19_quaterni X0 = k6_numbers) \wedge \\ (k20_quaterni X0 = k6_numbers)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k32_quaterni \\ (k27_quaterni X0 X1) = k3_xcmplx_0 (k32_quaterni X0) (k32_quaterni \\ X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow ((k32_quaterni X0 = k6_numbers) \Rightarrow \\ (X0 = k6_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$k32_quaterni k21_quaterni = k6_numbers \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k8_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$k1_quatern2 = k21_quaterni \quad (8)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(v1_xreal_0 (k32_quaterni X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0)\wedge(v1_quaterni X1))\Rightarrow(m1_subset_1 (k27_quaterni X0 X1) k1_quaterni) \quad (10)$$

Assume the following.

$$v1_quaterni k21_quaterni \quad (11)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(m1_subset_1 (k18_quaterni X0) k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Leftrightarrow(X0 \in k1_numbers) \quad (13)$$

Assume the following.

$$k21_quaterni = k6_numbers \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k8_real_1 X0 X1 = k8_real_1 X1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_quaterni)\Rightarrow(v1_quaterni X0) \quad (17)$$

Theorem 1

$$\forall X0.(v1_quaterni X0)\Rightarrow(k27_quaterni k1_quatern2 X0 = k6_numbers)$$