

t9_quatern3 (TMUr- Wdw5ZbKrDMxWtyG9b12Pi6CfDBW5aBe)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k27_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k25_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xcmplx_0 : \iota$ be given. Let $k11_quaterni : \iota$ be given. Let $k12_quaterni : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k27_quaterni \\
& X0 X1 = k26_quaterni (k26_quaterni (k23_quaterni (k9_real_1 (k9_real_1 \\
& (k9_real_1 (k8_real_1 (k17_quaterni X0) (k17_quaterni X1)) (k8_real_1 \\
& (k18_quaterni X0) (k18_quaterni X1))) (k8_real_1 (k19_quaterni \\
& X0) (k19_quaterni X1))) (k8_real_1 (k20_quaterni X0) (k20_quaterni \\
& X1))) (k25_quaterni (k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 \\
& (k17_quaterni X0) (k18_quaterni X1)) (k8_real_1 (k18_quaterni \\
& X0) (k17_quaterni X1))) (k8_real_1 (k19_quaterni X0) (k20_quaterni \\
& X1))) (k8_real_1 (k20_quaterni X0) (k19_quaterni X1))) k1_xcmplx_0)) \\
& (k25_quaterni (k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 (k17_quaterni \\
& X0) (k19_quaterni X1)) (k8_real_1 (k19_quaterni X0) (k17_quaterni \\
& X1))) (k8_real_1 (k20_quaterni X0) (k18_quaterni X1))) (k8_real_1 \\
& (k18_quaterni X0) (k20_quaterni X1))) k11_quaterni)) (k25_quaterni \\
& (k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 (k17_quaterni X0) \\
& (k20_quaterni X1)) (k8_real_1 (k20_quaterni X0) (k17_quaterni \\
& X1))) (k8_real_1 (k18_quaterni X0) (k19_quaterni X1))) (k8_real_1 \\
& (k19_quaterni X0) (k18_quaterni X1))) k12_quaterni)))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k8_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow((m1_subset_1 X0 k1_numbers)\Rightarrow((X0 = k17_quaterni X0)\wedge((k18_quaterni X0 = k6_numbers)\wedge((k19_quaterni X0 = k6_numbers)\wedge(k20_quaterni X0 = k6_numbers)))))) \quad (5)$$

Assume the following.

$$v3_membered k1_numbers \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(m1_subset_1 (k20_quaterni X0) k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(m1_subset_1 (k19_quaterni X0) k1_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(m1_subset_1 (k18_quaterni X0) k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v1_quaterni X0)\Rightarrow(m1_subset_1 (k17_quaterni X0) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k8_real_1 X0 X1 = k8_real_1 X1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k7_real_1 X0 X1 = k7_real_1 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v1_membered X0) \quad (15)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xcmplx_0 X1)) \quad (17)$$

Theorem 1

$$\forall X0.(v1_quaterni X0)\Rightarrow(\forall X1.(v1_quaterni X1)\Rightarrow((m1_subset_1 X0 k1_numbers)\Rightarrow(k27_quaterni X0 X1 = k27_quaterni X1 X0)))$$