

l79_quaterni (TMRbmpBXyFcFAJ- jAGJDw2RUVycZTSLjMT3d)

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Let $v1_quaterni : \iota \Rightarrow o$ 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 $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (X0 = k6_quaterni (k17_quaterni X0) (k18_quaterni X0) (k19_quaterni X0) (k20_quaterni X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (k27_quaterni X0 X1 = k10_quaterni X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (k26_quaterni X0 X1 = k7_quaterni X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (k6_quaterni X0 X1 X2 X3 = k7_quaterni \\ & (k7_quaterni (k23_quaterni X0 (k25_quaterni X1 k1_xcmplx_0)) \\ & (k25_quaterni X2 k11_quaterni)) (k25_quaterni X3 k12_quaterni)))))) \quad (4) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow ((\\
& \quad k17_quaterni (k10_quaterni X0 X1) = k9_real_1 (k9_real_1 (k9_real_1 \\
& \quad (k8_real_1 (k17_quaterni X0) (k17_quaterni X1)) (k8_real_1 (k18_quaterni \\
& \quad X0) (k18_quaterni X1))) (k8_real_1 (k19_quaterni X0) (k19_quaterni \\
& \quad X1))) (k8_real_1 (k20_quaterni X0) (k20_quaterni X1))) \wedge ((k18_quaterni \\
& \quad (k10_quaterni X0 X1) = k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 \\
& \quad (k17_quaterni X0) (k18_quaterni X1)) (k8_real_1 (k18_quaterni \\
& \quad X0) (k17_quaterni X1))) (k8_real_1 (k19_quaterni X0) (k20_quaterni \\
& \quad X1))) (k8_real_1 (k20_quaterni X0) (k19_quaterni X1))) \wedge ((k19_quaterni \\
& \quad (k10_quaterni X0 X1) = k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 \\
& \quad (k17_quaterni X0) (k19_quaterni X1)) (k8_real_1 (k19_quaterni \\
& \quad X0) (k17_quaterni X1))) (k8_real_1 (k20_quaterni X0) (k18_quaterni \\
& \quad X1))) (k8_real_1 (k18_quaterni X0) (k20_quaterni X1))) \wedge (k20_quaterni \\
& \quad (k10_quaterni X0 X1) = k9_real_1 (k7_real_1 (k7_real_1 (k8_real_1 \\
& \quad (k17_quaterni X0) (k20_quaterni X1)) (k8_real_1 (k20_quaterni \\
& \quad X0) (k17_quaterni X1))) (k8_real_1 (k18_quaterni X0) (k19_quaterni \\
& \quad X1))) (k8_real_1 (k19_quaterni X0) (k18_quaterni X1))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (v1_quaterni (k10_quaterni X0 X1)) \tag{6}$$

Assume the following.

$$v1_quaterni k1_xcmplx_0 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_quaterni X1)) \Rightarrow (v1_quaterni (k25_quaterni X0 X1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_quaterni X1)) \Rightarrow (v1_quaterni (k23_quaterni X0 X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k26_quaterni X0 X1) k1_quaterni) \tag{10}$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (m1_subset_1 (k20_quaterni X0) k1_numbers) \tag{11}$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (m1_subset_1 (k19_quaterni X0) k1_numbers) \tag{12}$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(m1_subset_1\ (k18_quaterni\ X0)\ k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(m1_subset_1\ (k17_quaterni\ X0)\ k1_numbers) \quad (14)$$

Assume the following.

$$m1_subset_1\ k12_quaterni\ k1_quaterni \quad (15)$$

Assume the following.

$$m1_subset_1\ k11_quaterni\ k1_quaterni \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni\ X0)\wedge(v1_quaterni\ X1))\Rightarrow(k26_quaterni\ X0\ X1 = k26_quaterni\ X1\ X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_quaterni)\Rightarrow(v1_quaterni\ X0) \quad (18)$$

Theorem 1

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