

t27_quaterni
(TMWs3Gk4HVbVYXNGHFg7c9CAPVhNJYPhVNe)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 k1_numbers) \Rightarrow ((k17_quaterni (k6_quaterni X0 X1 \\ X2 X3) = X0) \wedge ((k18_quaterni (k6_quaterni X0 X1 X2 X3) = X1) \wedge ((k19_quaterni \\ (k6_quaterni X0 X1 X2 X3) = X2) \wedge (k20_quaterni (k6_quaterni X0 X1 \\ X2 X3) = X3))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (4)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 \\ k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (5)$$

Assume the following.

$$v1_xboole_0 \text{ np_}0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_numbers)\wedge(v1_xreal_0 \ X1))\Rightarrow(k7_real_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(k5_square_1 \ X0 = k3_square_1 \ X0) \quad (9)$$

Assume the following.

$$k6_numbers = k6_quaterni \ k6_numbers \ k6_numbers \ k6_numbers \ k6_numbers \quad (10)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0)\Rightarrow(k3_square_1 \ X0 = k3_xcmplx_0 \ X0 \ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(v1_xcmplx_0 \ X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(v1_xreal_0 \ X0) \quad (13)$$

Theorem 1

$$\forall X0.(v1_quaterni \ X0)\Rightarrow((X0 = k6_numbers)\Rightarrow(k7_real_1 \ (k7_real_1 \ (k7_real_1 \ (k5_square_1 \ (k17_quaterni \ X0)) \ (k5_square_1 \ (k18_quaterni \ X0))) \ (k5_square_1 \ (k19_quaterni \ X0))) \ (k5_square_1 \ (k20_quaterni \ X0)) = k6_numbers))$$