

t76_quatern3
(TMWGT4FDuvDC43FnVyjkeCqV1eUdeMS8htj)

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Let $k8_quatern2 : \iota \Rightarrow \iota$ be given. Let $k11_quaterni : \iota$ be given. Let $k28_quaterni : \iota \Rightarrow \iota$ be given. Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_quaterni : \iota \Rightarrow \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ 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 $np_1 : \iota$ 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 $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_quaterni : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k12_quaterni : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k4_quaterni : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow & (k8_quatern2 X0 = k6_quaterni (k10_real_1 \\ & (k17_quaterni X0) (k5_square_1 (k3_quatern2 X0))) (k1_real_1 \\ & (k10_real_1 (k18_quaterni X0) (k5_square_1 (k3_quatern2 X0)))) \\ & (k1_real_1 (k10_real_1 (k19_quaterni X0) (k5_square_1 (k3_quatern2 \\ & X0)))) (k1_real_1 (k10_real_1 (k20_quaterni X0) (k5_square_1 \\ & (k3_quatern2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$k32_quaterni k11_quaterni = np_1 \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 X0 np_1 = X0) \quad (4)$$

Assume the following.

$$k31_quaterni\ k11_quaterni = k28_quaterni\ k11_quaterni \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni\ X0) \Rightarrow & (k31_quaterni\ X0 = k6_quaterni\ (k17_quaterni \\ & X0)\ (k1_real_1\ (k18_quaterni\ X0))\ (k1_real_1\ (k19_quaterni\ X0)) \\ & (k1_real_1\ (k20_quaterni\ X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} (k17_quaterni\ k11_quaterni = k6_numbers) \wedge & ((k18_quaterni\ k11_quaterni = \\ & k6_numbers) \wedge ((k19_quaterni\ k11_quaterni = np_1) \wedge ((k20_quaterni \\ & k11_quaterni = k6_numbers) \wedge ((k17_quaterni\ k12_quaterni = k6_numbers) \wedge \\ & ((k18_quaterni\ k12_quaterni = k6_numbers) \wedge ((k19_quaterni\ k12_quaterni = \\ & k6_numbers) \wedge (k20_quaterni\ k12_quaterni = np_1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} ((v2_xreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} (m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0 \\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (10)$$

Assume the following.

$$k4_xcmplx_0\ np_0 = np_0 \quad (11)$$

Assume the following.

$$k3_xcmplx_0\ np_1\ np_1 = np_1 \quad (12)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow & (k5_square_1\ X0 = k3_square_1 \\ & X0) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0) \Rightarrow (k3_quatern2\ X0 = k32_quaterni\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (16)$$

Assume the following.

$$k11_quaterni = k4_quaterni \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (18)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (19)$$

Assume the following.

$$v1_quaterni k4_quaterni \quad (20)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (23)$$

Theorem 1 $k8_quatern2 k11_quaterni = k28_quaterni k11_quaterni$.