

t36_quatern3

(TMJhJdhcBG6hmtKSkgyv68QfjxFTKRbfsVvd)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $k29_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $k28_quaterni : \iota \Rightarrow \iota$ be given. Let $k9_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_quaterni : \iota \Rightarrow \iota$ be given. Let $k7_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k32_quaterni (k28_quaterni X0) = k32_quaterni X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2.(v1_quaterni X2) \Rightarrow (k26_quaterni (k29_quaterni X0 X1) X2 = k29_quaterni (k26_quaterni X0 X2) X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2.(v1_quaterni X2) \Rightarrow (r1_xxreal_0 (k3_quatern2 (k26_quaterni (k26_quaterni X0 X1) X2)) (k7_real_1 (k7_real_1 (k3_quatern2 X0) (k3_quatern2 X1)) (k3_quatern2 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2.(v1_quaterni X2) \Rightarrow (k26_quaterni (k26_quaterni X0 X1) X2 = k26_quaterni X0 (k26_quaterni X1 X2)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (k3_quatern2 X0 = k32_quaterni X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (k29_quaterni X0 X1 = k9_quaterni X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(k28_quaterni\ X0 = k8_quaterni\ X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni\ X0)\wedge(v1_quaterni\ X1))\Rightarrow(k26_quaterni\ X0\ X1 = k7_quaterni\ X0\ X1) \quad (8)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(v1_quaterni\ (k8_quaterni\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(\forall X1.(v1_quaterni\ X1)\Rightarrow(k9_quaterni\ X0\ X1 = k7_quaterni\ X0\ (k8_quaterni\ X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni\ X0)\wedge(v1_quaterni\ X1))\Rightarrow(k26_quaterni\ X0\ X1 = k26_quaterni\ X1\ X0) \quad (11)$$

Theorem 1

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(\forall X1.(v1_quaterni\ X1)\Rightarrow(\forall X2.(v1_quaterni\ X2)\Rightarrow(r1_xxreal_0\ (k3_quatern2\ (k29_quaterni\ (k26_quaterni\ X0\ X1)\ X2))\ (k7_real_1\ (k7_real_1\ (k3_quatern2\ X0)\ (k3_quatern2\ X1))\ (k3_quatern2\ X2))))))$$