

t86_quaterni
(TMW37H8sSAmzCARgbszHpNk4i1eL1SRX72Z)

October 27, 2020

Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_quaterni : \iota \Rightarrow \iota$ be given. Let $k29_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k32_quaterni (k29_quaterni X0 X1) = k32_quaterni (k29_quaterni X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (r1_xreal_0 (k6_xcmplx_0 (k32_quaterni X0) (k32_quaterni X1)) (k32_quaterni (k29_quaterni X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((k17_complex1 X0 = X0) \vee (k17_complex1 X0 = k4_xcmplx_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k4_xcmplx_0 (k6_xcmplx_0 X0 X1) = k6_xcmplx_0 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k6_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (v1_xreal_0 (k32_quaterni X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (7)$$

Theorem 1

$$\forall X0.(v1_quaterni\ X0)\Rightarrow(\forall X1.(v1_quaterni\ X1)\Rightarrow(r1_xreal_0 \\ (k17_complex1\ (k6_xcmplx_0\ (k32_quaterni\ X0)\ (k32_quaterni\ X1))) \\ (k32_quaterni\ (k29_quaterni\ X0\ X1))))$$