

t80\_quaterni  
(TMW3ge6KNzXeSx6EirQ2M2ciXbVxAjfQrYL)

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Let  $v1\_quaterni : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k32\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k29\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k26\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (\forall X1.(v1\_quaterni X1) \Rightarrow (r1\_xxreal\_0 (k32\_quaterni (k26\_quaterni X0 X1)) (k2\_xcmplx\_0 (k32\_quaterni X0) (k32\_quaterni X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (k32\_quaterni (k28\_quaterni X0) = k32\_quaterni X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_quaterni X0) \wedge (v1\_quaterni X1)) \Rightarrow (k29\_quaterni X0 X1 = k9\_quaterni X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (k28\_quaterni X0 = k8\_quaterni X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_quaterni X0) \wedge (v1\_quaterni X1)) \Rightarrow (k26\_quaterni X0 X1 = k7\_quaterni X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (v1\_quaterni (k8\_quaterni X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (\forall X1.(v1\_quaterni X1) \Rightarrow (k9\_quaterni X0 X1 = k7\_quaterni X0 (k8\_quaterni X1))) \quad (7)$$

**Theorem 1**

$$\forall X0.(v1\_quaterni\ X0) \Rightarrow (\forall X1.(v1\_quaterni\ X1) \Rightarrow (r1\_xxreal\_0 \\ (k32\_quaterni\ (k29\_quaterni\ X0\ X1))\ (k2\_xcmplx\_0\ (k32\_quaterni\ X0)\ (k32\_quaterni\ X1))))$$