

# t11\_quatern3 (TM- coR2C4VqWiv7akh69nJb9ExVhsYQ6cWUa)

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Let  $v1\_quaterni : \iota \Rightarrow o$  be given. Let  $k5\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_quatern2 : \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k27\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k31\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k18\_quatern2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v1\_quaterni X0) \Rightarrow & ((k17\_quaterni (k27\_quaterni X0 \\ & (k31\_quaterni X0)) = k7\_real\_1 (k7\_real\_1 (k7\_real\_1 (k5\_square\_1 \\ & (k17\_quaterni X0)) (k5\_square\_1 (k18\_quaterni X0))) (k5\_square\_1 \\ & (k19\_quaterni X0))) (k5\_square\_1 (k20\_quaterni X0))) \wedge ((k18\_quaterni \\ & (k27\_quaterni X0 (k31\_quaterni X0)) = k6\_numbers) \wedge ((k19\_quaterni \\ & (k27\_quaterni X0 (k31\_quaterni X0)) = k6\_numbers) \wedge (k20\_quaterni \\ & (k27\_quaterni X0 (k31\_quaterni X0)) = k6\_numbers)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_quaterni X0) \Rightarrow & ((k17\_quaterni (k18\_quatern2 X0 \\ & X0) = k5\_square\_1 (k3\_quatern2 X0)) \wedge ((k18\_quaterni (k18\_quatern2 \\ & X0 X0) = k6\_numbers) \wedge ((k19\_quaterni (k18\_quatern2 X0 X0) = k6\_numbers) \wedge \\ & (k19\_quaterni (k18\_quatern2 X0 X0) = k6\_numbers)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_quaterni X0) \Rightarrow (\forall X1.(v1\_quaterni X1) \Rightarrow (k18\_quatern2 X0 X1 = k27\_quaterni X0 (k31\_quaterni X1))) \quad (3)$$

## Theorem 1

$$\begin{aligned} \forall X0.(v1\_quaterni X0) \Rightarrow & (k5\_square\_1 (k3\_quatern2 X0) = k7\_real\_1 \\ & (k7\_real\_1 (k7\_real\_1 (k5\_square\_1 (k17\_quaterni X0)) (k5\_square\_1 \\ & (k18\_quaterni X0))) (k5\_square\_1 (k19\_quaterni X0))) (k5\_square\_1 \\ & (k20\_quaterni X0))) \end{aligned}$$