

# t53\_quaterni (TMGiGDSPF- BDM5UWsKLY3P7KFfoEX8r8mt8H)

October 27, 2020

Let  $k31\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k12\_quaterni : \iota$  be given. Let  $k28\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k17\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  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  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_quaterni : \iota \Rightarrow o$  be given. Let  $k11\_quaterni : \iota$  be given. Let  $k30\_quaterni : \iota \Rightarrow \iota$  be given. Let  $k5\_quaterni : \iota$  be given. Let  $k26\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k23\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k25\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xcmplx\_0 : \iota$  be given. Assume the following.

$$\begin{aligned}
 (k17\_quaterni (k31\_quaterni k12\_quaterni) = k6\_numbers) \wedge ((k18\_quaterni \\
 (k31\_quaterni k12\_quaterni) = k6\_numbers) \wedge ((k19\_quaterni (k31\_quaterni \\
 k12\_quaterni) = k6\_numbers) \wedge (k20\_quaterni (k31\_quaterni k12\_quaterni) = \\
 k1\_real\_1 np\_1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 \forall X0. (v1\_quaterni X0) \Rightarrow ((k17\_quaterni (k31\_quaterni X0) = \\
 k17\_quaterni X0) \wedge ((k18\_quaterni (k31\_quaterni X0) = k1\_real\_1 \\
 (k18\_quaterni X0)) \wedge ((k19\_quaterni (k31\_quaterni X0) = k1\_real\_1 \\
 (k19\_quaterni X0)) \wedge (k20\_quaterni (k31\_quaterni X0) = k1\_real\_1 \\
 (k20\_quaterni X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 (k17\_quaterni k11\_quaterni = k6\_numbers) \wedge ((k18\_quaterni k11\_quaterni = \\
 k6\_numbers) \wedge ((k19\_quaterni k11\_quaterni = np\_1) \wedge ((k20\_quaterni \\
 k11\_quaterni = k6\_numbers) \wedge ((k17\_quaterni k12\_quaterni = k6\_numbers) \wedge \\
 ((k18\_quaterni k12\_quaterni = k6\_numbers) \wedge ((k19\_quaterni k12\_quaterni = \\
 k6\_numbers) \wedge (k20\_quaterni k12\_quaterni = np\_1)))))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. (v1\_quaterni X0) \Rightarrow (k31\_quaterni X0 = k30\_quaterni X0) \tag{4}$$

Assume the following.

$$k12\_quaterni = k5\_quaterni \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_quaterni X0) \Rightarrow & (k28\_quaterni X0 = k26\_quaterni ( \\ & k26\_quaterni (k23\_quaterni (k1\_real\_1 (k17\_quaterni X0)) (k25\_quaterni \\ & (k1\_real\_1 (k18\_quaterni X0)) k1\_xcmplx\_0)) (k25\_quaterni (k1\_real\_1 \\ & (k19\_quaterni X0)) k11\_quaterni)) (k25\_quaterni (k1\_real\_1 ( \\ & k20\_quaterni X0)) k12\_quaterni)) \end{aligned} \quad (6)$$

Assume the following.

$$v1\_quaterni k5\_quaterni \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_quaterni X0) \Rightarrow & (k30\_quaterni X0 = k26\_quaterni ( \\ & k26\_quaterni (k23\_quaterni (k17\_quaterni X0)) (k25\_quaterni ( \\ & k1\_real\_1 (k18\_quaterni X0)) k1\_xcmplx\_0)) (k25\_quaterni (k1\_real\_1 \\ & (k19\_quaterni X0)) k11\_quaterni)) (k25\_quaterni (k1\_real\_1 ( \\ & k20\_quaterni X0)) k12\_quaterni)) \end{aligned} \quad (8)$$

**Theorem 1**  $k31\_quaterni k12\_quaterni = k28\_quaterni k12\_quaterni$ .