t74_quatern3 (TMKJbJbuXEzaudwM-RKk7VEP4jVHG1fcLqSU)

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Let $v1\_quaterni : \iota \Rightarrow o$ be given. Let $k6\_quatern2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5\_square\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_quatern2 : \iota \Rightarrow \iota$ be given. Let $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_quaterni : \iota$ be given. Assume the following.

$$\forall X0.(v1\_quaterni\ X0) \Rightarrow (\forall X1.(v1\_quaterni\ X1) \Rightarrow ((k17\_quaterni\ (k6\_quatern2\ X0\ X1) = k10\_real\_1\ (k7\_real\_1\ (k7\_real\_1\ (k7\_real\_1\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k17\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\ X0)\ (k18\_quaterni\ X1)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k19\_quaterni\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k20\_quaterni\ X0)))\ (k5\_square\_1\ (k3\_quatern2\ X1))) \wedge ((k18\_quaterni\ (k6\_quatern2\ X0\ X1) = k10\_real\_1\ (k7\_real\_1\ (k9\_real\_1\ (k9\_real\_1\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k18\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\ X1)\ (k17\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k20\_quaterni\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k19\_quaterni\ X0)))\ (k5\_square\_1\ (k3\_quatern2\ X1))) \wedge ((k19\_quaterni\ (k6\_quatern2\ X0\ X1) = k10\_real\_1\ (k9\_real\_1\ (k9\_real\_1\ (k7\_real\_1\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k19\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\ X1)\ (k20\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k17\_quaterni\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k18\_quaterni\ X0)))\ (k5\_square\_1\ (k3\_quatern2\ X1))) \wedge (k20\_quaterni\ (k6\_quatern2\ X0\ X1) = k10\_real\_1\ (k9\_real\_1\ (k7\_real\_1\ (k9\_real\_1\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k20\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\ X1)\ (k19\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k18\_quaterni\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k17\_quaterni\ X0)))\ (k5\_square\_1\ (k3\_quatern2\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_quaterni\ X0) \Rightarrow (X0 = k6\_quaterni\ (k17\_quaterni\ X0)\ (k18\_quaterni\ X0)\ (k19\_quaterni\ X0)\ (k20\_quaterni\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_quaterni\ X0)\wedge(v1\_quaterni\ X1))\Rightarrow(\\ m1\_subset\_1\ (k6\_quatern2\ X0\ X1)\ k1\_quaterni) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_quaterni)\Rightarrow(v1\_quaterni\ X0) \tag{4}$$

Theorem 1

$$\forall X0.(v1\_quaterni\ X0)\Rightarrow(\forall X1.(v1\_quaterni\ X1)\Rightarrow(k6\_quatern2\\ X0\ X1 = k6\_quaterni\ (k10\_real\_1\ (k7\_real\_1\ (k7\_real\_1\ (k7\_real\_1\\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k17\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\\ X0)\ (k18\_quaterni\ X1)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k19\_quaterni\\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k20\_quaterni\ X0)))\ (k5\_square\_1\\ (k3\_quatern2\ X1)))\ (k10\_real\_1\ (k7\_real\_1\ (k9\_real\_1\ (k9\_real\_1\\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k18\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\\ X1)\ (k17\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k20\_quaterni\\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k19\_quaterni\ X0)))\ (k5\_square\_1\\ (k3\_quatern2\ X1)))\ (k10\_real\_1\ (k9\_real\_1\ (k9\_real\_1\ (k7\_real\_1\\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k19\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\\ X1)\ (k20\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k17\_quaterni\\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k18\_quaterni\ X0)))\ (k5\_square\_1\\ (k3\_quatern2\ X1)))\ (k10\_real\_1\ (k9\_real\_1\ (k7\_real\_1\ (k9\_real\_1\\ (k8\_real\_1\ (k17\_quaterni\ X1)\ (k20\_quaterni\ X0))\ (k8\_real\_1\ (k18\_quaterni\\ X1)\ (k19\_quaterni\ X0)))\ (k8\_real\_1\ (k19\_quaterni\ X1)\ (k18\_quaterni\\ X0)))\ (k8\_real\_1\ (k20\_quaterni\ X1)\ (k17\_quaterni\ X0)))\ (k5\_square\_1\\ (k3\_quatern2\ X1)))))$$