

l65_quaterni (TM- bkvakJcDiMPh2LiM9RGzXxrwNvWJAzqwd)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k7_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k7_quaterni \\ X0 X1 = k6_quaterni (k7_real_1 (k17_quaterni X0) (k17_quaterni \\ X1)) (k7_real_1 (k18_quaterni X0) (k18_quaterni X1)) (k7_real_1 \\ (k19_quaterni X0) (k19_quaterni X1)) (k7_real_1 (k20_quaterni \\ X0) (k20_quaterni X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ (v1_quaterni X2) \Rightarrow ((X2 = k7_quaterni X0 X1) \Rightarrow ((k17_quaterni X2 = \\ k7_real_1 (k17_quaterni X0) (k17_quaterni X1)) \wedge ((k18_quaterni \\ X2 = k7_real_1 (k18_quaterni X0) (k18_quaterni X1)) \wedge ((k19_quaterni \\ X2 = k7_real_1 (k19_quaterni X0) (k19_quaterni X1)) \wedge (k20_quaterni \\ X2 = k7_real_1 (k20_quaterni X0) (k20_quaterni X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (v1_quaterni (k7_quaterni X0 X1)) \quad (3)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ (v1_quaterni X2) \Rightarrow (\forall X3.(v1_quaterni X3) \Rightarrow (k7_quaterni \\ (k7_quaterni (k7_quaterni X0 X1) X2) X3 = k6_quaterni (k7_real_1 \\ (k7_real_1 (k7_real_1 (k17_quaterni X0) (k17_quaterni X1)) (k17_quaterni \\ X2)) (k17_quaterni X3)) (k7_real_1 (k7_real_1 (k7_real_1 (k18_quaterni \\ X0) (k18_quaterni X1)) (k18_quaterni X2)) (k18_quaterni X3)) (\\ k7_real_1 (k7_real_1 (k7_real_1 (k19_quaterni X0) (k19_quaterni \\ X1)) (k19_quaterni X2)) (k19_quaterni X3)) (k7_real_1 (k7_real_1 \\ (k7_real_1 (k20_quaterni X0) (k20_quaterni X1)) (k20_quaterni \\ X2)) (k20_quaterni X3)))))) \end{aligned}$$